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# CITY OF WINNIPEG

# REPORT
## OF THE
# CITY HEALTH Department

*FOR THE YEAR ENDING*
*31st DECEMBER*

**1927**

*Presented by*

The Medical Officer of Health

July 1928

22501421690

CITY OF WINNIPEG

# REPORT
## of the
# CITY HEALTH
## Department

FOR THE YEAR ENDING
31st December
1927

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## COMMITTEE ON HEALTH
## 1927

Alderman R. J. Shore, Chairman
Alderman A. H. Pulford
Alderman C. C. Chisholm
Alderman F. H. Davidson
Alderman J. O'Hare
Alderman J. Simpkin
Alderman W. B. Simpson
Alderman J. Blumberg
Alderman J. A. Barry
His Worship Mayor R. H. Webb (ex-officio)

## STAFF
(December, 1927)

### Medical Health Officer
A. J. Douglas, M.D.

### Laboratory
Bacteriologist—M. S. Lougheed, M.D.
Assistant Bacteriologist — Miss M. Wilson.
Assistant—H. Robinson

### District Physicians
W. Turnbull, M.D.
O. C. Dorman M.D.
E. H. Alexander, M.D.

### Communicable Diseases Division
Chief Inspector—W. J. T. Watt
Inspector—G. Hanby
" —A. Paull
" —C. H. Hargrave
" —H. H. Marshall

Tuberculosis Nurse — Miss K. M. Vanetta
Tuberculosis Nurse—Miss A. G. Luke
" " —Miss H. Smyth
Record Clerk—G. R. Moore
Clerk—S. L. Steele

## **Staff**—Continued

### Sanitary Inspections Division

Chief Inspector—E. W. J. Hague
Smoke & Supervising Inspector—
P. Pickering.
Inspector—S. J. Scheving
" —O. S. Oliver
" —B. C. Brough
" —J. McHardy
" —A. Barclay
" —J. Shepherd

Tenement & Supervising Inspector—
A. Officer
Supervising Inspector—D. Little
Inspector—J. Foggie
" —R. McQuillan
" —A. Aitken
" —F. C. Austin
Inspectors' Clerk—W. Hanby
Clerk—G. Duffield

### Dairy Division

Chief Inspector—E. C. Brown
Creameries Inspector—F. Lutley
Inspector—T. J. Booth
" —J. M. Jackson

### Food Division

Chief Inspector—A. Rigby
Inspector—A. W. Foote
" —G. R. Mines

### Bureau of Child Hygiene

Manager—A. G. Lawrence
Nurse—Miss M. M. Wonnacott
" —Miss A. J. Attrill
" —Miss L. Spratt
" —Miss C. Maddin
" —Miss A. Moore
" —Miss C. Munro
" —Miss L. A. Schwalm
" —Miss E. A. Bennett
" —Miss M. M. Harper
" —Miss M. W. Macrae*

Nurse—Miss A. M. Wilkins
" —Miss H. A. Carter
" —Miss C. W. Thom
" —Mrs. C. E. Smith
" —Miss B. M. Bowles
Dietitian—Miss M. A. Graham
Assistant—Mrs. J. McDonald
" —Mrs. H. Twist
" —Mrs. A. B. Gibson
Caretaker—H. N. Steel

Attending Physician—R. F. Rorke, M.D.
" " —F. G. Schwalm, M.D.

*(Resigned - December 17th)

### Division of Records and Statistics

Secretary—A. G. Lawrence
Stenographer-Clerk—
Miss E. S. Halliday

Stenographer-Clerks—
Miss M. M. Ryan
Miss E. Fraser

### Street Cleaning Division

Chief of Division—E. A. Wood
Scavenging Superintendent—
J. Middleton
Street Cleaning Superintendent—
L. Woodhall

Clerk—J. J. Higgins
" —C. Fortt
" —J. McTavish
Stenographer—Miss V. Pope

# Report of the Medical Health Officer

City Health Department,
Winnipeg, Man., Feb. 29th, 1928

Chairman and Members of the
Committee on Health.

Gentlemen:

I have the honor to submit for your consideration the report of the Health Department for the year 1927. This includes the reports of the heads of divisions and a statement of the cost of the year's work.

## Statistics

The number of deaths, excluding stillbirths, was 1,650. Assuming the population to be 198,932 (City Assessor's figures), this gives a gross death rate of 8.29. This is the lowest death rate we have on record, being just under the previous low rate of 1925 which was 8.30.

The number of deaths in children under one year of age was 273, giving a mortality rate of 61.17 per 1,000 living births. Here again we have a new low rate. It is with considerable satisfaction that we record this, for we feel that the work of the Department during the past fifteen years may have played a part in bringing about this result. When it is borne in mind that when infant welfare was embarked on as part of the Civic programme our rate was 207, it does not require much figuring to see the number of children's lives which have been saved. We are not near the end yet; it is possible to get this rate lower, and this will be brought about by continuing the work we are in and broadening it by education of the public as to its possibilities.

The number of births, excluding stillbirths, was 4,463, giving a birth rate of 22.44 per 1,000 population.

This year's rate shows a very slight decline under that of the previous year, which was 22.54.

The marriage rate shows a slight increase over 1926, the figures being 12.27 and 12.01 respectively.

Details regarding births and deaths will be found in the report of the Statistician. These figures extend over the period of which we have a record and should be studied in order to obtain an appreciation of the variations which have taken place over a period of years.

## Financial Statement

The statement is divided into two parts, the first covering those services concerned with the control and prevention of disease, and the second, refuse collection and disposal and street cleaning services.

## CONTROL AND PREVENTION OF DISEASE, 1927

### Summary

| | | |
|---|---|---|
| (a) | Personal services | $101,354.60 |
| (b) | Outside services | 7,716.94 |
| (c) | Material, supplies and repairs | 8,069.13 |
| (d) | Equipment and replacements | 2,843.10 |
| (e) | Fuel, water, light and power | 1,062.69 |
| (f) | Other expenses | 250.00 |
| (i) | Interest | 600.00 |
| | | $121,896.46 |

### Expenditure by Divisions

**C-1 Administration and Statistics** (Controllable)—

| | | | |
|---|---|---|---|
| (a) | Personal Services | $11,628.00 | |
| (b) | Outside Services | 148.31 | |
| (c) | Material, Supplies and Repairs | 372.08 | |
| (d) | Equipment, Additions and Replacements | 183.31 | |
| (f) | Unforeseen Expenditures | 250.00 | |
| | | | $ 12,581.70 |

**C-2 Bacteriological Laboratory** (Controllable)—

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 6,036.00 | |
| (b) | Outside Services | 55.50 | |
| (c) | Material, Supplies and Repairs | 721.57 | |
| (d) | Equipment, Additions and Replacements | 11.55 | |
| (e) | Fuel, Water, Light and Power | 111.54 | |
| | | | $ 6,936.16 |

**C-3 Treatment and Prevention of Communicable Diseases—**

C-3-1 Acute Communicable Diseases (Controllable)—

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 11,724.00 | |
| (b) | Outside Services | 163.84 | |
| (c) | Material, Supplies and Repairs | 430.91 | |
| (d) | Equipment, Additions and Replacements | 289.45 | |
| | | | $ 12,608.20 |

**C-3-2 Tuberculosis** (Controllable)—

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 4,107.17 | |
| (c) | Material, Supplies and Repairs | 1,068.34 | |
| (d) | Equipment, Additions and Replacements | 80.41 | |
| | | | $ 5,255.92 |

**C-3-3 Smallpox and Diphtheria Prevention** (Controllable)—

| | | | |
|---|---|---|---|
| (b) | Outside Services | $ 1,723.84 | |
| (c) | Material, Supplies and Repairs | 912.69 | |
| | | | $ 2,636.53 |

**C-3-4 Automobile Services** (Controllable)—

| | | | |
|---|---|---|---|
| (b) | Outside Services | $ 240.91 | |
| (c) | Material, Supplies and Repairs | 546.34 | |
| (d) | Equipment, Additions and Replacements | 685.13 | |
| | | | $ 1,472.38 |

**C-3-5 Fixed Charges on Debenture Debt** (Uncontrollable)—

| | | | |
|---|---|---|---|
| (i) | Interest | $ 600.00 | |
| | | | $ 600.00 |

| | |
|---|---|
| Total Treatment and Prevention of Communicable Diseases | $ 22,573.03 |

**C-4 Sanitary Inspection** (Controllable)—

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 29,484.00 | |
| (b) | Outside Services | 39.00 | |
| (c) | Material, Supplies and Repairs | 330.53 | |
| (d) | Equipment, Additions and Replacements | 782.41 | |
| | | | $ 30,635.94 |

**C-5 Food and Dairy Inspection** (Controllable)—

C-5-1 Dairy Inspection—

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 7,950.00 | |
| (b) | Outside Services | 500.90 | |
| (c) | Material, Supplies and Repairs | 176.10 | |
| (d) | Equipment, Additions and Replacements | 186.55 | |
| | | | $ 8,813.55 |

C-5-2 Food Inspection—

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 6,666.00 | |
| (b) | Outside Services | 36.00 | |
| (c) | Material, Supplies and Repairs | 73.56 | |
| (d) | Equipment, Additions and Replacements | 145.15 | |
| | | | $ 6,920.71 |
| | Total Food and Dairy Inspection | | $ 15,734.26 |

**C-6 Child Welfare** (Controllable)—

C-6-1 Babies' Milk Depot—

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 4,073.10 | |
| (b) | Outside Services | 3,673.64 | |
| (c) | Material, Supplies and Repairs | 2,431.16 | |
| (d) | Equipment, Additions and Replacements | 8.85 | |
| (e) | Fuel, Water, Light and Power | 951.15 | |
| | | | $ 11,137.90 |

C-6-2 Child Welfare Visiting Nurses—

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 19,686.33 | |
| (c) | Material, Supplies and Repairs | 144.45 | |
| (d) | Equipment, Additions and Replacements | 470.29 | |
| | | | $ 20,301.07 |
| | Total Child Welfare | | $ 31,438.97 |

**C-7 Medical Relief** (Controllable)—

C-7-1 District Physicians—

| | | | |
|---|---|---|---|
| (b) | Outside Services | $ 1,135.00 | |
| (c) | Material, Supplies and Repairs | 861.40 | |
| | Total Medical Relief | | $ 1,996.40 |

**Gross Expenditure, Control and Prevention of Disease ..... $121,896.46**

## Revenue

(Credited to City's Revenue Account)

| | | |
|---|---|---|
| Police Court Fines and Costs | $ 143.50 | |
| Fees for Fumigation | 6.75 | |
| Fees for Laboratory Work | 260.00 | |
| Sale of Infants' Feedings at Milk Depot | 1,555.19 | |
| | | $ 1,965.44 |
| Net Expenditure | | $119,931.02 |

## Cost Per Capita, Control and Prevention of Disease

(Population 198,932)

| | |
|---|---|
| Gross Expenditure per Capita | 61.3 |
| Net Expenditure per Capita | 60.3 |

## REFUSE COLLECTION AND DISPOSAL AND STREET CLEANING, 1927

### Summary

| | | |
|---|---|---|
| (a) | Personal Services | $205,816.77 |
| (b) | Outside Services | 48,173.17 |
| (c) | Material, Supplies and Repairs | 51,105.42 |
| (d) | Equipment and Replacements | 1,358.65 |
| (e) | Fuel, water, light and power | 1,368.93 |
| (f) | Other expenses | 125.00 |
| (i) | Interest | 9,745.00 |
| (i) | Sinking fund | 4,174.46 |
| | | $321,867.40 |

### Expenditure by Divisions

**C-8 REFUSE COLLECTION AND DISPOSAL.**

**C-8-1 Scavenging—**

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 89,575.63 | |
| (b) | Outside Services | 9,538.21 | |
| (c) | Material, Supplies and Repairs | 28,434.89 | |
| (d) | Equipment, Additions and Replacements | 809.60 | |
| (e) | Fuel, Water, Light and Power | 15.00 | |
| | | | $128,373.33 |

**C-8-3 Nuisance Ground Operating—**

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 3,650.16 | |
| (b) | Outside Services | 878.50 | |
| (c) | Material, Supplies and Repairs | 144.70 | |
| | | | $ 4,673.36 |

**C-8-6 Crematory No. 2 Operating—**

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 9,804.13 | |
| (b) | Outside Services | 1,139.37 | |
| (c) | Material, Supplies and Repairs | 192.98 | |
| (e) | Fuel, Water, Light and Power | 290.81 | |
| | | | $ 11,427.29 |

**C-8-7—Crematory No. 2 Maintenance—**

| | | | |
|---|---|---|---|
| (c) | Material, Supplies and Repairs | | $ 2,355.91 |

**C-8-8 Crematory No. 3 Operating—**

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 11,593.83 | |
| (b) | Outside Services | 714.30 | |
| (c) | Material, Supplies and Repairs | 30.57 | Cr. |
| (e) | Fuel, Water, Light and Power | 621.96 | |
| | | | $ 12,899.52 |

**C-8-9—Crematory No. 3 Maintenance—**

| | | | |
|---|---|---|---|
| (c) | Material, Supplies and Repairs | | $ 10,091.08 |

**C-8-10 Ash Removal—**

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 15,662.35 | |
| (b) | Outside Services | 22,306.90 | |
| (c) | Material, Supplies and Repairs | 2,297.56 | |
| | | | $ 40,266.81 |

**C-8-11—Fixed Charges on Debenture Debt—**

| | | | |
|---|---|---|---|
| (i) | Interest | $ 9,745.00 | |
| (i) | Sinking Fund | 4,174.46 | |
| | | | $13,919.46 |

Total, Refuse Collection and Disposal .....$224,006.76

## D-1 OFFICE OF STREET CLEANING DIVISION.

**D-1-1 Administration—**

| | | | |
|---|---|---|---|
| (a) | Personal Services | $ 10,020.00 | |
| (b) | Outside Services | 52.44 | |
| (c) | Material, Supplies and Repairs | 352.10 | |
| (d) | Equipment, Additions and Replacements | ..... | |
| | | | $ 10,424.54 |

**D-1-2 Automobile Services—**

| | | | |
|---|---|---|---|
| (b) | Outside Services | $ 149.94 | |
| (c) | Material, Supplies and Repairs | 603.74 | |
| (d) | Equipment, Additions and Replacements | ..... | |
| | | | $ 753.68 |

## D-4 SPRINKLING AND CLEANING.

### D-4-1 Asphalt Cleaning (Pavement)—

| | | |
|---|---|---|
| (a) Personal Services | $ 54,293.56 | |
| (b) Outside Services | 10,362.14 | |
| (c) Material, Supplies and Repairs | 6,051.25 | |
| (d) Equipment, Additions and Replacements | 549.05 | |
| (f) Other Expenses | 125.00 | |
| | | $ 71,381.00 |

### D-4-2 Macadam Pavement Cleaning—

| | | |
|---|---|---|
| (a) Personal Services | $ 3,033.57 | |
| (b) Outside Services | 969.59 | |
| | | $ 4,003.16 |

### D-4-4 Paved Lane Cleaning and Paper Picking—

| | | |
|---|---|---|
| (a) Personal Services | $ 3,418.10 | |
| (b) Outside Services | 350.02 | |
| | | $ 3,768.12 |

### D-4-6 Water Sprinkling and Flushing—

| | | |
|---|---|---|
| (a) Personal Services | 527.36 | |
| (b) Outside Services | 444.61 | |
| (c) Material, Supplies and Repairs | 209.49 | |
| (e) Fuel, Water, Light and Power | 137.82 | |
| | | $ 1,319.28 |

## D-5 MISCELLANEOUS.

### D-5-3 Cutting Noxious Weeds—

| | | |
|---|---|---|
| (a) Personal Services | $ 3,634.44 | |
| (b) Outside Services | 335.15 | |
| (c) Material, Supplies and Repairs | 163.00 | |
| | | $ 4,132.59 |

### D-5-4 Yards Maintenance—

| | | |
|---|---|---|
| (a) Personal Services | 603.64 | |
| (b) Outside Services | 932.00 | |
| (c) Material, Supplies and Repairs | 239.29 | |
| (e) Fuel, Water, Light and Power | 303.34 | |
| | | $ 2,078.27 |

| | |
|---|---|
| Total, Street Cleaning | $ 97,860.64 |
| Grand Total, Refuse Collection and Disposal and Street Cleaning | $321,867.40 |

## Communicable Diseases

The total number of cases of typhoid fever reported during the year was 27, with 6 deaths. In 1926 there were 66 cases and 8 deaths. The gross typhoid rate per 100,000 was 3. The corrected rate is 1.5 per 100,000. This rate is obtained by deducting non-residents who died here, and deaths in residents who contracted infection outside the City. The typhoid situation during the year was as follows.

Of the twenty-seven cases, seven were non-resident and eight received infection while absent from the City. The remaining twelve cases developed from some source within the City. Of the seven non-resident cases, one died, and of the eight residents infected outside, two died. The remaining three deaths include one which was carried forward from the 1926 records, one was a direct contact with a known case, and one was classified as a City death, although giving a history of visiting outside. The cases which originated in the City were unconnected with any known source of infection that we were able to trace. There was one instance where a second case developed in a home where a patient was being cared for.

It seems reasonable to attribute these sporadic cases to direct or indirect contact with unknown carriers. In spite of careful investigation we were not able to bring any of these to light.

As has been usual for the past few years, there was some prevalence of smallpox. The total number of cases was 48 with no deaths, against forty-three cases and two deaths in 1926. Twenty-one patients were admitted to our hospital from adjoining municipalities. Six residents received infection outside the City.

It is of interest to note that the twenty-one cases originating in the City all developed during the first six months of the year. Cases from adjoining municipalities kept coming in until late in the year.

Unrecognized cases were found in four different homes. In one of these, a mother and four children developed the disease.

Ages of the affected ranged from one to sixty-seven years.

With the exception of two contacts whose vaccinations were performed some days after exposure, all City cases were in unvaccinated individuals.

The type throughout the year was uniformly mild, but this does not alter the fact that the smallpox situation remains unsatisfactory. That we should continually have to deal with this most preventable disease is an unfavorable commentary on the enterprise of the community. Many people today seem to regard this disease lightly and to neglect or even decry vaccination. The number of unvaccinated people in the City is too high, notwithstanding the opportunities given to take advantage of this preventive. I do not look for much improvement in our smallpox

rate until a better appreciation of this disease, its possibilities as to danger, and its preventability, is evinced by some of our citizens.

Chickenpox showed an increase over the previous year; 1,018 cases were reported, against 770 cases. Notifications of this disease reach us chiefly through school nurses, and in the smaller proportion of instances, where a physician is called, we get the report from him.

Chickenpox has been distinctly on the increase for the past five years. There is a possibility that this increase may be more apparent than real, for there can be no question that we are now getting a larger proportion of chickenpox cases notified than we did formerly. After the past four years of extensive prevalence we may look for a lowering of the incidence during 1928; towards the end of 1927 a downward trend was evident.

Every case of chickenpox is carefully checked, and the diagnosis cleared, in order that the possibility of smallpox being unrecognized may be eliminated.

This was a low year for measles. Only 456 cases were notified with three deaths. In 1926 there were 2,844 cases and eleven deaths.

The high months were January and June, the latter being an unusual month for prevalence. These two high months were due to two local outbreaks in the central part of the City. These outbreaks were responsible for 240 cases. The fatality rate was low, being .6 per 100 cases.

We had a hold-over from the outbreak of mumps of 1926, when 1,506 cases occurred. Two hundred and ninety cases was the total for the year. Two hundred and forty of these occurred between January and July. Control of this disease is unsatisfactory. Our notifications come almost entirely through the school nurses and it is difficult to get the public to take precautions against spread.

The figures for whooping cough are almost identical with those of 1926; 476 cases and 7 deaths, against 420 cases and 6 deaths.

The total number of cases of diphtheria notified during the year was 542; deaths, 34, as compared with five hundred and fifty-four cases and 20 deaths in 1926. Rates per 100,000, 17.1 and 10.1.

The outstanding feature of the diphtheria situation and the reason for the higher rate was a manifestation of increased virulence as compared with past years. A group of cases appeared in the central part of the City in which the infection was probably due to association of the diphtheria organism and the streptococcus. These cases were characterized by the presence of haemorrhagic sloughing membranes, high temperature, great prostration and rapidly fatal termination. In the early stages of these, the diphtheria organism was often not recoverable from throat cultures, later it appeared. Persons who were exposed to these cases

developed the same type of disease as the patients. In one instance three people died in one household.

By taking the Wards of the City, and grouping the cases and deaths which occurred in each, this virulence is well illustrated. Ward I—83 cases and 4 deaths; rate per 100,000 population 6.7; fatality rate per 100 cases, 4.8. Ward II—where these cases developed—184 cases and 15 deaths; rate per 100,000, 22.6; rate per 100 cases, 8.1. Ward III—178 cases, 6 deaths; rate per 100,000, 8.1; rate per 100 cases, 3.3.

This is the first time in many years that a group of cases has presented this severe type and bred true from individual to individual.

Included in our total of 542 cases, are 79 cases which came into our hospital for treatment from points outside the City; of these 9 died. There was an increase in the number of carriers discovered during the year, 142 against 96 for the year preceding. Unrecognized cases totalled 36 against 22.

Toxoid administration in the schools and at the Bureau of Child Welfare was carried on throughout the year. We covered all the public schools and two parochial schools. Figures for this will be found in another part of this report. Considerable toxoid preventive work was carried out in various children's institutions and we had no trouble from Diphtheria in any of these.

Eight hundred and eighty-five cases of scarlet fever were notified during the year; deaths six; against six hundred and seventy-six cases and eight deaths in 1926. As the above figures will indicate, the type was mild. The forecast for an increase, made in last year's report, held true and at the time of writing this report our figures of normal expectancy have not yet been reached. Ward I recorded the greatest number of cases, viz: 285, deaths, 3; Ward II, 238 cases and 2 deaths; Ward III, 239 cases and 10 deaths. Outside cases totalled 93 with one death. The peak months of the year were January and June, each with 100 cases. The June outbreak occurred at a time of year when prevalence of this disease is usually on the decline, and affected principally Wards I and II. Mildness of type was undoubtedly the cause of much spread and rendered control very difficult. Many more cases than those notified undoubtedly occurred, and helped to keep the infection alive. Children were frequently found in schools and elsewhere, in an infectious condition, whom their parents claimed had not suffered from any indisposition whatever. Secondary or follow-on cases in homes numbered 115, and we were able to bring to light 36 missed cases. Mode of conveyance throughout the year appeared to be contact.

Two hundred and one cases of tuberculosis of the lungs were reported with seventy-four deaths; of tuberculosis of other organs, 93 cases. The rate per 100,000 for tuberculosis of the lungs was 37.2 against a rate of 46.7 in 1926.

The hospital chest clinics continued to function on the lines described in previous reports. The King Edward Memorial Hospital is conducting a daily clinic which is carried on wholly by the staff of that institution.

As usual death registration was the first intimation we had of the existence of some of our cases. An improvement is apparent here over past years, only 17 cases falling into this class. There were 24 non-residents admitted to our hospitals. Notification by physicians continues at a low point; it may be, however, that credit for notification of many cases is taken from the physicians through hospitals and sanatoria reporting cases on admission.

The tuberculosis death rate of the City for 1927 is the lowest we have on record and stands even in a more favorable light when the outside deaths are deducted.

The presence of anterior poliomyelitis (infantile paralysis), in points East, West and South of us, caused some concern during the late Summer and Autumn months. It is gratifying to be able to state that we were fortunate here, indeed we almost escaped entirely. Total cases notified numbered four with one death. Of these four cases, two were non-residents. A number of suspected cases were isolated and kept under observation; none of these developed paralytic symptoms.

## Medical Relief

District physicians calls for the year totalled 322 as compared with 298 for the preceding year. There were 341 office consultations against 502.

We were again greatly assisted in our medical relief work by the nurses of the Margaret Scott Nursing Mission who gave their services in one hundred and twenty-one cases.

Officers of the department made 505 calls for the purpose of clearing the diagnosis of cases reported by School Nurses, parents and others.

Certificates enabling children to return to school, after exclusion from any cause, numbered 2,904.

Three thousand and ninety-one vaccinations were performed during the year, 1,184 being done in the City Hall and 1,907 in the public schools.

The amount of Insulin distributed was 134,900 units, the number of patients receiving this being twelve. Of this number, six pay whole or part of the cost of the preparation. Cash collected, $209.20.

As formerly, the Provincial Board of Health supplied Diphtheria Antitoxin. During the year 2,674,000 units were given out. Cash received, $365.25.

## Municipal Hospitals

The following summary submitted by the Municipal Hospitals shows

the number of cases of communicable diseases admitted during 1927, together with the number of deaths occurring in these institutions.

## King George Hospital

| Diseases | Cases | Deaths | Percentage |
|---|---|---|---|
| Diphtheria | 394 | 31 | 7.87% |
| Diphtheria Carriers | 52 | | |
| Scarlet Fever | 639 | 3 | .47% |
| Measles | 83 | 2 | 2.41% |
| German Measles | 24 | | |
| Erysipelas | 62 | 2 | 3.23% |
| Mumps | 8 | | |
| Whooping Cough | 30 | 2 | 6.66% |
| Smallpox | 49 | | |
| Chickenpox | 71 | | |
| Encephalitis Lethargica | 1 | | |
| Miscellaneous | 356 | 8 | 2.26% |
| Totals | 1,769 | 48 | 2.71% |
| Died within 36 hours | | 14 | |
| Corrected rate | | | 1.92% |

## King Edward Memorial Hospital

| | Cases | Deaths | Percentage |
|---|---|---|---|
| Tuberculosis | 141 | 38 | 27% |

## Sociological Data Relative to Reported Cases of Venereal Diseases for the Year Ending December 31st, 1927

**GONORRHOEA—**

| | | | |
|---|---|---|---|
| Number of cases tabulated | | | 1530 |
| **Sex—** Male | | 1214 | |
| Female | | 316 | |
| | | 1530 | |
| **Marital State—** | | | |
| Married, Male | 312 | | |
| Single, " | 884 | | |
| Widowed, " | 8 | | |
| Divorced, " | 3 | | |
| | | 1207 | |
| Married, Female | 118 | | |
| Single, " | 159 | | |
| Widowed, " | 5 | | |
| Divorced, " | 0 | | |
| | | 282 | |

**Children (0-12 years)—**

| | | |
|---|---|---|
| Male | 7 | |
| Female | 34 | |
| | | 41 |
| Total | | 1530 |

| MALE | | FEMALE | |
|---|---|---|---|
| **Ages** | | **Ages** | |
| 12 years and under | 7 | 12 years and under | 34 |
| From 12 to 20 years | 144 | From 12 to 20 years | 136 |
| " 20 to 30 " | 627 | " 20 to 30 " | 107 |
| " 30 to 40 " | 291 | " 30 to 40 " | 29 |
| " 40 to 50 " | 121 | " 40 to 50 " | 5 |
| " 50 to 60 " | 18 | " 50 to 60 " | 5 |
| " 60 to 70 " | 6 | " 60 to 70 " | 0 |
| | 1214 | | 316 |

**CHANCROID**—1 Male, Single, 28 years.

**SYPHILIS—**

| | | | |
|---|---|---|---|
| Number of cases tabulated | | | 632 |
| **Sex—** | Male | 447 | |
| | Female | 185 | |
| | | 632 | |

**Marital State—**

| | | |
|---|---|---|
| Married, Male | 171 | |
| Single, " | 252 | |
| Widowed, " | 13 | |
| Divorced, " | 3 | |
| | | 439 |
| Married, Female | 109 | |
| Single, " | 64 | |
| Widowed, " | 6 | |
| Divorced, " | 1 | |
| | | 180 |

**Children (0-12 years)—**

| | | |
|---|---|---|
| Male | 8 | |
| Female | 5 | |
| | | 13 |
| Total | | 632 |

| MALE | | FEMALE | |
|---|---|---|---|
| **Ages** | | **Ages** | |
| 12 years and under | 8 | 12 years and under | 5 |
| From 12 to 20 years | 25 | From 12 to 20 years | 52 |
| " 20 to 30 " | 176 | " 20 to 30 " | 78 |
| " 30 to 40 " | 123 | " 30 to 40 " | 34 |
| " 40 to 50 " | 76 | " 40 to 50 " | 12 |
| " 50 to 60 " | 29 | " 50 to 60 " | 3 |
| " 60 to 70 " | 9 | " 60 to 70 " | 1 |
| " 70 to 80 " | 1 | " 70 to 80 " | 0 |
| | 447 | | 185 |

Number of patients who discontinued treatment and had to be followed up ..... 25

Number of patients who changed physicians ..... 125

## General Summary of Cases Reported During the Years 1921, 1922, 1923, 1924, 1925, 1926 and 1927

**GONORRHOEA—**

| | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 |
|---|---|---|---|---|---|---|---|
| No. of cases reported: | **1135** | **1247** | **1457** | **1700** | **1375** | **1433** | **1530** |
| **Adults:** | | | | | | | |
| Male— | 978 | 1050 | 1201 | 1440 | 1164 | 1173 | 1207 |
| Female— | 140 | 177 | 224 | 223 | 189 | 228 | 282 |
| **Children (0-12 yrs.)** | | | | | | | |
| Male— | 3 | 4 | 7 | 9 | 4 | 3 | 7 |
| Female— | 14 | 16 | 25 | 28 | 18 | 29 | 34 |
| | 1135 | 1247 | 1457 | 1700 | 1375 | 1433 | 1530 |

| **SYPHILIS—** | **1921** | **1922** | **1923** | **1924** | **1925** | **1926** | **1927** |
|---|---|---|---|---|---|---|---|
| No. of cases reported: | **596** | **346** | **370** | **455** | **492** | **647** | **632** |
| **Adults—** | | | | | | | |
| Male— | 382 | 238 | 233 | 310 | 353 | 453 | 439 |
| Female— | 194 | 95 | 125 | 129 | 130 | 184 | 185 |
| **Children (0-12 yrs.)—** | | | | | | | |
| Male— | 12 | 8 | 2 | 9 | 2 | 6 | 8 |
| Female— | 8 | 5 | 10 | 7 | 7 | 4 | 5 |
| | 596 | 346 | 370 | 455 | 492 | 647 | 632 |

| **CHANCROID —** | **1921** | **1922** | **1923** | **1924** | **1925** | **1926** | **1927** |
|---|---|---|---|---|---|---|---|
| Male— | 1 | 1 | 1 | 2 | 0 | 5 | 1 |
| | 1 | 1 | 1 | 2 | 0 | 5 | 1 |

## Report on Venereal Disease Clinics for the Year Ending December 31st, 1927

**GONORRHEA—**

| | | | | |
|---|---|---|---|---|
| Number of cases tabulated | | | | 903 |
| **Sex—** | Male | | 629 | |
| | Female | | 274 | |
| | | | 903 | |
| **Marital State—** | | | | |
| Married, Male | | 145 | | |
| Single, " | | 470 | | |
| Widowed, " | | 7 | | |
| Divorced, " | | 2 | | |
| | | | 624 | |
| Married, Female | | 96 | | |
| Single, " | | 142 | | |
| Widowed, " | | 4 | | |
| Divorced, " | | 0 | | |
| | | | 242 | |
| **Children (0-12 years)** | | | | |
| | Male | 5 | | |
| | Female | 32 | | |
| | | | 37 | |
| | Total | | 903 | |

| | | | | |
|---|---|---|---|---|
| **SYPHILIS**—Number of cases tabulated | | | | 461 |
| **Sex—** | Male | | 312 | |
| | Female | | 149 | |
| | | | 461 | |
| **Marital State—** | | | | |
| Married, Male | | 111 | | |
| Single, " | | 181 | | |
| Widowed, " | | 10 | | |
| Divorced, " | | 2 | | |
| | | | 304 | |
| Married, Female | | 82 | | |
| Single, " | | 57 | | |
| Widowed, " | | 5 | | |
| Divorced, " | | 0 | | |
| | | | 144 | |
| **Children (0-12 years)—** | | | | |
| | Male | 8 | | |
| | Female | 5 | | |
| | | | 13 | |
| | Total | | 461 | |

**VENEREAL DISEASE CLINICS**—Continued

Number of treatments given:

| | |
|---|---|
| Gonorrhea | 25,751 |
| Syphilis | 10,394 |
| Nonvenereal | 269 |
| Total | 36,414 |

## Laboratory Examinations

| | | |
|---|---|---|
| Wasserman tests for Syphilis | | 1,767 |
| | Positive | 347 |
| | Negative | 1,420 |
| Examination of pus for Gonococcus | | 1,492 |
| | Positive | 1,013 |
| | Negative | 479 |
| Examination for Treponema Pallidum | | 1 |
| | Positive | 1 |

## Legislation Enacted

**Dominion—**

No legislation affecting this Department.

**Provincial—**

Regulations of the Provincial Board of Health respecting the Manufacture and Sale of Mattresses or other articles of Bedding, and the sale or use of materials used in the making of articles of bedding, or for upholstering.

The regulations forbid: The use of any material which has been used by or about any person having a communicable disease; the sale of any article of bedding which has been used by such a person; the use of second-hand material in the making of articles of bedding, unless such material has been sterilized by a reasonable process approved by the Health Officer, or the use of feathers or down, either new or second-hand, unless the same has been sterilized. Every article made wholly or in part from second-hand materials is to be so labelled. Second-hand material not to be manufactured or sold for use in the making of bedding, or in upholstering unless sterilized by a process approved by the Health Officer. All such materials to be sold in sealed packages bearing a label giving the name and address of the vendor, and a statement that the contents have been renovated and sterilized or disinfected as required by the regulations. The finding of any infectious, insanitary, filthy, unhealthful or second-hand material in that part of a factory devoted to the manufacture of articles of bedding or to upholstering furniture, to be prima facie evidence that such material has been and is being used in violation of these regulations. The penalty is a fine of from five dollars to one hundred dollars.

A Regulation of the Provincial Board of Health prohibiting the use of Hydrocyanic (or Prussic) Acid as an insecticide was amended by

making it read "Hydrocyanic Acid **or of any salt or derivative thereof.**" This was rendered necessary because the law was being evaded by using some of the newer chemical compounds.

**The City of Winnipeg—**

By-law No. 12472, the new Building By-law, was passed by Council on August 8th, after being under consideration by a revising Committee for two years or more. The Building By-law of any City has considerable bearing on the work of a Health Department.

Important as it is to deal with existing buildings as regards sanitation, it is even more important to secure that in all new buildings the features which may affect the health of the future occupants of such buildings are carefully regulated. Some of these features are: sufficient open spaces round the building so as to provide for adequate lighting and ventilation; the construction of adequate windows; a sufficient number of plumbing fixtures, properly installed; and that dwellings especially shall be durable, dry and warm. It would appear that some provisions which were found in the previous by-law, and which were inserted in such by-law at the request of the Health Department, provisions which have been most useful to the Department in securing sanitary conditions in dwellings, have been omitted from the new by-law. The requirements regarding plumbing in apartment blocks may be specified as one instance, although there are many others. It may, therefore, be necessary for this Department to ask for some further consideration of this matter in order that some of these important health requirements for new buildings may again be made law, by insertion in the Building By-law, the Health By-law, or a separate Housing By-law.

## Legislation Required

Some legislation regarding housing on the lines suggested above. The Health Officer must exercise a measure of control over the sanitary condition of buildings, more particularly as regards dwellings. Failing enactment of amendments to the new Building By-law, the necessary powers might be given by amendments to the Health By-law. This by-law is now more than twenty years old and needs revising in any event.

A by-law requiring the provision and maintenance on all dwellings, during the fly-season, of screen doors and windows. This means first of all an amendment to the City Charter giving power to the City to enact such a by-law. When such powers were asked of the Manitoba Legislature a few years ago, the request was refused. A further attempt should be made to obtain this legislation, as fly-screens are a necessity in this country, both for comfort and also to control fly-borne infections. Quite frequently our own nurses, and those of other institutions, find them-

selves called upon in Summer-time to attend cases where there are sick children in houses, in which their efforts are handicapped by the neglect of owners to provide these necessary conveniences. Those who have once seen a sick baby in a hot room in Summer-time, with flies crawling over its lips, have no doubts whatever of the necessity for excluding flies by properly screening all openings.

We are still without a by-law to control more effectively all vermin such as rats, mice, bed-bugs, cockroaches, and lice. There is, for instance, no such a law as the "Cleansing of Persons Act" of England and Scotland, which gives the Health Officer power to require the effective cleansing of persons in lodging houses who are infested with body lice. Occasionally we receive complaints about such persons and scarcely know how to deal with them.

As pointed out in several previous Annual Reports, a by-law to regulate Lodging Houses more efficiently would be useful. Such a by-law would provide for a nominal license fee, and would also define a standard for all such premises, both as regards construction and maintenance.

## Installation of Plumbing

It is always an important matter in a growing City to secure the extension of sewers and water mains in new streets in order that the houses erected thereon may be provided with plumbing. During 1927 a few such extensions were constructed and 46 notices were served on owners to install plumbing. Twenty-eight outside privies were removed, but 14 new privies were erected in connection with houses built on streets without sewers, so that the net reduction was 14. Some of the plumbing notices have not yet expired. All new buildings on streets with sewers were, of course, provided with plumbing. As over 800 dwellings were built during the year, the proportion of these built on streets without sewers was very small.

| December 31st, 1926 | | December 31st, 1927 | |
|---|---|---|---|
| Brick pit closets | 303 | Brick pit closets | 290 |
| Earth pits | 3 | Earth pits | 2 |
| Total | 306 | Total | 292 |

This is an extremely small number for a City of this size.

Since 1905 the reduction has been as follows:

| | Box Closets | Earth Pits | Brick Pits | Total |
|---|---|---|---|---|
| June 30, 1905 | 6,153 | 186 | ..... | 6,339 |
| December 31, 1905 | 3,182 | 80 | 1,020 | 4,912 |
| June 30, 1906 | 2,255 | 747 | 1,325 | 4,327 |
| December 31, 1906 | 1,105 | 662 | 1,626 | 3,393 |
| December 31, 1907 | 80 | 201 | 1,535 | 1,816 |
| December 31, 1908 | 25 | 103 | 1,492 | 1,625 |
| December 31, 1909 | .... | 53 | 1,432 | 1,485 |
| December 31, 1910 | .... | 52 | 1,300 | 1,352 |
| December 31, 1911 | .... | 47 | 1,171 | 1,218 |
| December 31, 1912 | .... | 31 | 1,014 | 1,045 |
| December 31, 1913 | .... | 38 | 836 | 877 |
| December 31, 1914 | .... | 18 | 648 | 666 |
| December 31, 1915 | .... | 14 | 504 | 518 |
| December 31, 1916 | .... | 9 | 447 | 456 |
| December 31, 1917 | .... | 11 | 442 | 453 |
| December 31, 1918 | .... | 5 | 421 | 426 |
| December 31, 1919 | .... | 6 | 438 | 444 |
| December 31, 1920 | .... | 1 | 402 | 403 |
| December 31, 1921 | .... | 1 | 399 | 400 |
| December 31, 1922 | .... | 1 | 388 | 389 |
| December 31, 1923 | .... | 1 | 351 | 352 |
| December 31, 1924 | .... | 2 | 339 | 341 |
| December 31, 1925 | .... | 2 | 318 | 320 |
| December 31, 1926 | .... | 3 | 303 | 306 |
| December 31, 1927 | .... | 2 | 290 | 292 |

## Extension of Sewers and Water Mains

On completion of our annual census of outside closets, the following list was prepared and sent to the Public Utilities Committee.

---

## List of Streets With Four or More Houses Requiring Sewers or Water Mains

December 31st, 1927.

### I—FORT ROUGE

| Street | Block | Houses | Total | Remarks |
|---|---|---|---|---|
| Lindsay Street | Haskins to Jackson | 2 | | |
| Lindsay Street | Jackson to Lennon | 1 | | |
| Lindsay Street | Lennon to Mathers | 3 | 6 | |
| Cambridge St. | Jackson to Lennon | 7 | | |
| Cambridge St. | Lennon to Mathers | 4 | 11 | |

| Street | Block | Houses | Total | Remarks |
|---|---|---|---|---|
| Fleet Ave. | Harrow to Guelph | 1 | | |
| Fleet Ave. | Guelph to Wilton | 2 | | |
| Fleet Ave. | Wilton to Rockwood | 3 | 6 | |
| Lorette Ave. | Harrow to Guelph | 2 | | Sewer, Harrow to Rockwood, advertised Jan. 14, 1924. Not proceeded with. |
| Lorette Ave. | Guelph to Wilton | 1 | | |
| Lorette Ave. | Rockwood to Thurso | 2 | 5 | |
| Scotland Ave. | Wentworth to Stafford | 1 | | Sewer, Harrow to Rockwood, advertised Jan. 14, 1924. Not proceeded with. |
| Scotland Ave. | Harrow to Guelph | 2 | | |
| Scotland Ave. | Guelph to Wilton | 5 | | |
| Scotland Ave. | Wilton to Rockwood | 1 | | |
| Scotland Ave. | Nathaniel to Cambridge | 2 | 11 | |
| Weatherdon Ave. | Stafford to Harrow | 7 | | |
| Weatherdon Ave. | Harrow to Guelph | 2 | | |
| Weatherdon Ave. | Rockwood to Thurso | 3 | | |
| Weatherdon Ave. | Nathaniel to Beaumont | 1 | | |
| Weatherdon Ave. | Beaumont to Cambridge | 1 | 14 | |
| Carter Ave. | Stafford to Harrow | 4 | | |
| Carter Ave. | Harrow to Guelph | 4 | 8 | |
| Hector Ave. | Wentworth to Stafford | 3 | | Sewer but no water main. Water main to West lot line of Lot. 36, Blk. 23 (1922) |
| Hector Ave. | Stafford to Harrow | 3 | 6 | |
| Pembina Highway | (Scattered) | 11 | 11 | |
| Ebby Ave. | Lilac to Wentworth | 4 | | |
| Ebby Ave. | Wentworth to Stafford | 2 | 6 | |
| | | | 84 | |
| On streets with less than four houses, or where sewers and water mains have recently been constructed | | | 63 | |
| Total | | | 147 | |

## II—ASSINIBOINE RIVER TO HIGGINS AVE.

| Street | Block | Houses | Total | Remarks |
|---|---|---|---|---|
| Centre St. | Calder to Ellice | 2 | | |
| Centre St. | Ellice to Sargent | 3 | 5 | Water main. No sewer. |

| | | | |
|---|---|---|---|
| Keewatin St.....Rapelja to St. Matthews.... | 2 | | |
| Keewatin St.....St. Matthews to Ellice .... | 2 | | |
| Keewatin St.....Ellice to Sargent ..... | 1 | | |
| Keewatin St.....William to Elgin ..... | 3 | | Water main. No sewer. |
| Keewatin St.....Logan to C.P.R. Main line | 2 | 10 | Private sewer N. of Logan owned by Thos. Jackson & Sons. Other owners refuse to connect with this sewer unless it is taken over by the City. City sewer extends to 150′ N. of Gallagher Ave. |
| | | 15 | |
| On streets with less than four houses, or where sewers or water mains have recently been constructed ..... | | 27 | |
| Total ..... | | 42 | |

### III—C.P.R. MAIN LINE TO NORTH CITY LIMITS

| Street | Block | Houses | Total | Remarks |
|---|---|---|---|---|
| Atlantic Ave..... | Church to Machray ..... | 1 | | *Water main. No sewer. |
| Atlantic Ave..... | Airlies to McPhillips ..... | 3 | | |
| Atlantic Ave..... | McPhillips to Fife ..... | 1 | 5 | *Water main. No sewer. |
| Boyd Ave..... | Prince to McPhillips ..... | 4 | 4 | |
| Bannerman Ave..... | C.P.R. Beach Track to Airlies ..... | 2 | | |
| Bannerman Ave..... | Airlies to McPhillips.... | 2 | 4 | |
| Cathedral Ave..... | Galloway to C.P.R. Beach Line ..... | 1 | | |
| Cathedral Ave..... | C.P.R. Beach Line to Airlies ..... | 2 | | |
| Cathedral Ave..... | Airlies to Redford ..... | 1 | 4 | |
| Dalton St..... | Mountain to Machray ..... | 4 | 4 | *Sewer. No water main. |
| Inkster Ave..... | Parr to Arlington ..... | 4 | | |
| Inkster Ave..... | Arlington to C.P.R. Beach Line ..... | 1 | | |
| Inkster Ave... | C.P.R. Beach Line to Sinclair | 1 | | |
| Inkster Ave..... | Sinclair to Airlies ..... | 1 | 7 | |
| Kitchener Ave. (Near Keewatin) ..... | | 4 | 4 | (Dairies) |

| Street | Block | Houses | Total | Remarks |
|---|---|---|---|---|
| Lansdowne Ave..... | Parr to Sinclair ..... | 4 | 4 | |
| Monreith Ave..... | Mountain to Church ..... | 4 | 4 | Sewer. No water main. |
| Mountain Ave..... | McPhillips to Fife ..... | 6 | 6 | |
| Robertson St..... | Mountain to Church ..... | 4 | 4 | |
| | | | 50 | |
| On streets with less than four houses, or where sewers or water mains have recently been laid ..... | | | 21 | |
| Total ..... | | | 71 | |

## IV—ELMWOOD

| Street | Block | Houses | Total | Remarks |
|---|---|---|---|---|
| Beach Ave..... | Foster to Cameron ..... | 2 | | |
| Beach Ave..... | Cameron to Kent ..... | 1 | | Sewer. No water main |
| Beach Ave..... | Kent to Keenleyside ..... | 4 | | *Pit closets & cellars, flooded & insanitary. |
| Beach Ave..... | Keenleyside to E. City Limits ..... | 3 | 10 | *Water main. No sewer. |
| Herbert Ave..... | Foster to Green ..... | 6 | | |
| Herbert Ave..... | Kent to Keenleyside ..... | 4 | 10 | |
| Nairn Ave..... | Wolfe to Gray ..... | 2 | | Sewer. No water main |
| Nairn Ave..... | Cameron to Kent ..... | 2 | 4 | Sewer. No water main. |
| | | | 24 | |
| On streets with less than four houses, or where sewers or water mains have recently been laid ..... | | | 8 | |
| | | | 32 | |

## Summary

| | |
|---|---|
| Fort Rouge ..... | 84 |
| Assiniboine River to C.P.R. Main Line ..... | 15 |
| C.P.R. Main Line to Northern City Limits ..... | 50 |
| Elmwood ..... | 24 |
| | 173 |
| On streets with less than four houses, or where sewers or water mains have recently been laid ..... | 119 |
| Total outside closets in use Dec. 31, 1927 ..... | 292 |

## Table showing Additions and Removals During 1927

| | |
|---|---|
| Outside closets in use Dec. 31, 1926 | 306 |
| New closets built ..... 1927 | 14 |
| | 320 |
| Less closets removed during the year | 28 |
| Remaining | 292 |

Out of **812** houses erected during 1927, only **28** were built on streets without sewers and water mains.

## Housing

There were 812 new houses built in 1927, 10 apartment blocks, and 10 small mixed occupation blocks with 357 suites. The new buildings will provide accomodation for 1,110 families. As the increase in population, however, was about 3,000, the new construction will just about take care of this increase. There were only 571 vacant houses in December, and 392 vacant suites, a very small proportion of all dwellings. We see little, if any, change in the number of one-family dwellings occupied illegally as tenements. More on this subject will be found in the reports of the Chief Health Inspector and the Tenement Inspector.

## Educational Work

Members of the staff were frequently called upon during the year to address audiences of varying size upon subjects relating to public health work. Needless to say, we are always glad to comply with such requests.

For the education of our own staff the following course of lectures was arranged for the season of 1926-27:

1926

Nov. 20—Some Observations on the History of Plague—Dr. A. J. Douglas, Medical Health Officer.

Nov. 27—Meat Inspection—Dr. W. N. J. Kellam, Inspector in Charge Meat Inspection Branch, Dominion Government.

Dec. 4—Deformities and their Causes—Dr. Angus Murray.

Dec. 11—Rural Sanitation—James Arkle, Sanitary Inspector, St. James.

1927

Jan. 15—Tuberculin Testing of Cattle—Policies pursued by the Dominion Government—Dr. J. B. Still, Inspector in Charge Health of Animals Branch, Dominion Government.

Jan. 22—Food Poisoning Bacteria—Dr. M. S. Lougheed, Bacteriologist, City of Winnipeg.

Jan. 29—Some Special Activities of the Provincial Nurses Department—Miss E. Russell, Superintendent Provincial Public Health Nurses, Manitoba.

Feb. 5—Septic Tanks—L. A. Wilson, Manager, Anthes Foundry, Ltd.

Feb. 12—Mouth Infections and Disease—Winnipeg Dental Association.

Feb. 19—The Architect's Contribution to Health—Arthur A. Stoughton, Ph.B., University of Manitoba.

Feb. 26—Some Notes from the Convention of International Milk and Dairy Inspectors' Association, Philadelphia, U.S.A., 1926—Dr. W. A. Shoults, Provincial Department of Health.

Mar. 5—Some Features in Preventive Medicine—Dr. Fred Cadham, Provincial Bacteriologist.

Mar. 12—Causes of Mental Breakdown—Dr. A. T. Mathers.

Mar. 19—A Talk on Helio-Therapy—Dr. J. E. Pritchard.

## Conclusion

In conclusion I desire to express to the members of the staff my very sincere appreciation of the faithful manner in which they have discharged their duties throughout the year.

Respectfully submitted,

A. J. DOUGLAS,
Medical Health Officer.

# Report of Bacteriologist

A. J. Douglas, Esq., M.D.,
Medical Health Officer.

Dear Sir:

I have the honour to submit herewith a report of the work performed in the Bacteriological Laboratory for the year ending December 31st, 1927.

The work done is shown in the following table and for comparison the totals of the preceding three years are added.

| 1927 | Swabs for Diphtheria | | Sputa for T.B. | | Urethral Smears | | Widals for Typhoid | | Water | Milk and Cream | Urinalyses | Miscellaneous | Vaccinations | Total Examinations per Month |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Pos. | | Pos. | | Pos. | | Pos. | | | | | | |
| January | 387— | 11 | 47— | 2 | 18— | 1 | 0— | 0 | 50 | 161 | 20 | 7 | 22 | 712 |
| February | 371— | 17 | 66— | 11 | 32— | 1 | 1— | 0 | 46 | 205 | 40 | 3 | 65 | 829 |
| March | 356— | 15 | 64— | 6 | 26— | 1 | 0— | 0 | 58 | 214 | 39 | 11 | 26 | 794 |
| April | 327— | 6 | 40— | 8 | 28— | 2 | 4— | 0 | 73 | 193 | 27 | 14 | 76 | 782 |
| May | 521— | 16 | 39— | 2 | 41— | 3 | 0— | 0 | 78 | 153 | 26 | 12 | 561 | 1431 |
| June | 1530— | 47 | 42— | 2 | 28— | 3 | 0— | 0 | 83 | 194 | 18 | 5 | 157 | 2057 |
| July | 2081— | 57 | 43— | 5 | 17— | 3 | 1— | 0 | 72 | 135 | 18 | 12 | 28 | 2407 |
| August | 1345— | 34 | 39— | 6 | 33— | 5 | 1— | 0 | 72 | 152 | 15 | 10 | 50 | 1717 |
| September | 697— | 55 | 54— | 6 | 35— | 1 | 7— | 2 | 69 | 179 | 19 | 6 | 54 | 1120 |
| October | 1093— | 101 | 53— | 6 | 24— | 1 | 5— | 2 | 61 | 184 | 13 | 11 | 54 | 1498 |
| November | 922— | 59 | 58— | 5 | 22— | 5 | 0— | 0 | 69 | 210 | 24 | 7 | 77 | 1389 |
| December | 531— | 23 | 37— | 3 | 33— | 5 | 3— | 1 | 57 | 146 | 18 | 6 | 17 | 848 |
| 1927 Totals | 10161— | 441 | 582— | 62 | 337— | 34 | 22— | 5 | 788 | 2126 | 277 | 104 | 1187 | 15584 |
| 1926 " | 9563— | 361 | 468— | 59 | 340— | 53 | 70— | 13 | 715 | 2160 | 289 | 175 | 2493 | 16273 |
| 1925 " | 8714— | 378 | 501— | 50 | 317— | 68 | 32— | 4 | 536 | 1472 | 339 | 140 | 1731 | 13782 |
| 1924 " | 13737— | 1393 | 485— | 53 | 388— | 69 | 39— | 1 | 542 | 1286 | 556 | 248 | 1358 | 18640 |

## Water

During the year 788 samples of water were tested bacteriologically. Enumeration of colonies of micro-organisms on plain agar was done on each specimen, as well as inoculating broth cultures for gas formers. The samples were drawn from the following sources.

1. Domestic supply. Tap water from this laboratory was tested daily. The bacterial counts showed some seasonal variation.

2. Public Swimming Baths. Samples from Cornish, Pritchard and Y.M.C.A. baths were tested weekly, while open. The low counts from the Y.M.C.A. bath is worthy of mention.

3. Various water mains. Samples were taken from mains which had undergone or were undergoing alteration.

4. Samples from private individuals, residences, hotels, etc. The total number of tests done shows the highest so far recorded.

## Milk and Cream

The number of specimens examined totalled 2,126, about the same as in the preceding year. These specimens were examined for butter fat content, and the milk for water and solids. There were 499 bacterial counts made, which varied from 1,000 to over 100,000 colonies per c.c. The source of the 1,979 samples of milk and 147 samples of cream was as follows:

1. Dairy Inspectors brought in 1,916 of milk and 118 samples of cream.

2. The Bureau of Child Hygiene sent in 28 samples of milk and skimmed milk and 14 samples of cream.

3. Private individuals submitted 35 specimens of milk and 15 of cream.

## Diphtheria Cultures

Cultures examined for the diphtheria bacillus totalled 10,161, an increase over last year. The organism was found in 441 cultures.

These cultures are made by Doctors, Nurses, Health Inspectors, School Nurses, Margaret Scott Nursing Mission Nurses, and others. Many of the cultures were taken in the Laboratory, especially from children going to Summer Camps. During the holiday months of June, July and August, 4,956 cultures, or almost 50% of the total for the year, were examined, largely due to this source.

## Widals for Typhoid Fever

Blood examinations for aggultination of typhoid and paratyphoid bacilli totalled 22, with 5 giving positive reaction. This shows a decrease of about 70%.

## Urethral Smears

These totalled 337 for the year, which includes smears from the urethra, vagina, and cervix for the presence of gonococci. These smears were sent in for examination by the Doctors.

## Urinalyses

These totalled 277. Specimens were sent in for examination by Doctors, Nurses, Insurance Companies, the Bureau of Child Hygiene, and by

private individuals. The tests required are chemical, microscopical, sugar estimations and for tubercle bacilli.

## Vaccinations

These gave a total of 1,187. The source of individuals making up the list was as follows:

1. Children up to, and including, school age, especially in the month of May.

2. Employees of the two railroads and large stores who are required to have certificates of vaccination.

3. Contacts with cases.

There were 258 certificates issued.

## Miscellaneous Tests

This includes examination of mother's milk, gastric contents, hairs for parasites, blood counts, preparation of vaccines, and bacteriological examination of foods sent in by Mr. Rigby, Chief Food Inspector.

## Dispensary Work

The examination of school children for freedom from contagious diseases, and the issuing of certificates for return to school, has been continued as usual. Adults have come for free medical advice. The more serious of these have been referred to the Hospitals. House calls have been made at the request of Welfare Agencies and these cases disposed of at the time, if necessary, by having the patient transferred to hospital.

In conclusion I desire to express my appreciation for the manner in which Miss Wilson, the assistant, and Mr. Harry Robinson, the attendant, have fulfilled their respective duties.

Respectfully submitted,

M. S. LOUGHEED, M.D.,

Bacteriologist.

# Report of Chief of Division of Communicable Diseases

City Health Department,
Winnipeg, Man., March 17th, 1928.

A. J. Douglas, Esq., M.D.,
Medical Health Officer.

Dear Sir:

I have the honour to submit herewith report covering the work done by this division during the past year.

The total number of cases and deaths of all communicable diseases reported was four thousand two hundred and seventy and one hundred and ninety-two respectively; as compared with seven thousand, three hundred and fifty-six cases, and two hundred and four deaths for 1926. This shows a big reduction in number of cases recorded and a slight reduction in the number of deaths.

A summary is attached hereto showing the incidence of cases and deaths monthly. In this summary the diseases showing most notable increase or decrease compared with the year preceding can most readily be seen.

The typhoid situation remained quiet throughout the year.

Smallpox was never very far away, adjoining municipalities providing a large number of the total cases appearing on our records.

Scarlet Fever continued to be reported in increased numbers; a situation accounted for by the mild type prevailing.

## Inspectors' Reports

The total number of visits made by inspectors of this division was six thousand, six hundred and ninety-six; against nine thousand, eight hundred and eighty-six for the preceding year.

We operated with four inspectors in place of five as formerly; one inspector is employed chiefly in the toxoid administration and vaccination period and also assists in the office.

Their reports show a total of three thousand one hundred and five homes quarantined, and one thousand and twenty-one subsequent inspections made.

New cases investigated total three thousand four hundred and seventy-eight as compared with five thousand eight hundred and thirty-three in 1926.

One house and thirty-seven rooms were fumigated. This practice is now discontinued and the public appear to accept the advice of the de-

partment in the thorough cleansing and concurrent disinfection where fumigation formerly held sway. Inspectors supervise the terminal disinfection; in this way one thousand three hundred and thirty-four received attention. One hundred and seventy-four rooms and ten houses were sprayed.

The spray is brought into play almost exclusively for our tuberculosis homes and we endeavour to reach as many of these as possible.

## Miscellaneous Calls

Under this heading is grouped the calls from visiting nurses, parents and anonymous calls relating to suspect or unreported cases of communicable disease. Our records show over 550 such calls and embrace every notifiable disease. The reporting of these cases frequently discovered by visiting nurses in the conduct of their duties in the schools is a most important part of our control work. This is particularly noticeable in districts where certain diseases may be prevalent. It was demonstrated in Ward 1, during the Scarlet Fever outbreak, the records of the school nurse showing a large percentage of cases being discovered by visiting the homes of absentees. Such cases are confirmed through this Division and proper disposition of the case is made.

## Diphtheria Carriers

Many of these are discovered in the swabbing of contacts and in the swabbing of children in school classrooms when two or more cases of Diphtheria have been reported from the same room. Children absent from school with sore throat and without medical attention are at times found to be suffering from Diphtheria. It is often brought to light by a visit from the school visiting nurse. It is surprising how negligent and ignorant some parents remain to the dangers of the neglected sore throat.

These are the principal headings under which this division labours to prevent the spread of infection through unreported and unrecognized cases of communicable disease. Cases of Chickenpox, Measles, Mumps and Whooping Cough are most frequently reported in this way.

A summary prepared by the Medical Inspection Department of Schools is attached to this report and sets forth the number of cases of communicable diseases discovered by the nurses in the conduct of their work throughout the year.

Diphtheria did not increase in numbers, nevertheless the fatality rate is higher, principally in Ward 2; this change was very noticeable, that is, the type was more virulent and every effort was put forth to meet it.

A table showing Diphtheria deaths reported monthly and in wards is attached to this report; age incidence is included.

The combined reduction for the year in number of cases of Measles and Mumps reported was 3,604.

Chickenpox shows a considerable increase when compared with the preceding year.

None of the remaining major infections prevailed abnormally.

## Diphtheria and Smallpox Prevention

We were able, with the co-operation of the Medical Inspection Department of Public Schools, to complete the immunization of one thousand five hundred and sixty-six pupils, grade four and under, those consenting to have this done represent the total of all schools.

A table showing yearly totals over a period of five years is appended hereto; 1923-5 appears in one column, as the work commenced in 1923 was not completed until 1925.

This has now become a most important part of our routine preventive work and we hope, by giving satisfactory service, to increase the confidence of those who may be sceptical of results attained. It is now well established in many cities and we hope that our citizens will not fail to follow their lead and profit by their example.

## Vaccinations in Public Schools

As in former years we have continued to offer the services of a physician in vaccinating at the schools any who may have their parents' consent to have this operation performed. The response is not what it might be and we regret to note that many remain indifferent. We were not able to complete our schedule; a number of South-end schools having to remain over until next year, due to the Toxoid work overlapping.

The arrangements regarding the conduct of this work has continued to be quite satisfactory. The Department provides doctors, material, and literature; prepares schedules and attends to distribution of supplies.

Records are filed with the Department. The Nurses of the Medical Inspection Department of Schools distribute the cards and literature; collect same and complete records; prepare the children and assist the doctors.

## Tuberculosis Visiting Nurses

A summary of the work done by the three nurses employed on this branch of work, also tables relating to chest clinics, housing conditions etc., are attached to this report.

## Tuberculosis of Lungs

There were 229 cases and 74 deaths, distributed as follows:

| | WARDS | | | Institu- | Non- | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | tional | Resident | Total |
| Cases | 31 | 82 | 88 | 4 | 24 | 229 |
| Deaths | 9 | 26 | 28 | .... | 11 | 74 |
| Population | 59,249 | 66,136 | 73,547 | | | 198,932 |
| Morbidity Rate Per 100,000 | 52.3 | 123.9 | 119.1 | | | |
| Mortality Rate Per 100,000 | 15.1 | 39.3 | 38.0 | | | |

**SUMMARY** of cases and deaths as they appear in each district:

| DISTRICTS | 1 | 2 | 3 | Non-Residents | Total |
|---|---|---|---|---|---|
| Cases | 80 | 71 | 54 | 24 | 229 |
| Positive | 61 | 13 | 23 | .... | 97 |
| Clinically Positive | 19 | 58 | 31 | .... | 108 |
| Deaths | 23 | 22 | 18 | 11 | 74 |

**CASES IN HOSPITAL:** As they appear on our reords at the end of the year.

| DISTRICTS | 1 | 2 | 3 | Total |
|---|---|---|---|---|
| Patients in King Edward Memorial Hospital | 42 | 33 | 21 | 106 |
| Patients in Ninette | 47 | 7 | 13 | 67 |
| Patients in St. Roch's | 4 | 10 | 4 | 18 |
| Patients in Children's Hospital | 3 | 1 | .... | 4 |

**VISITING LIST:** Cases on visiting list for 1927.

| DISTRICTS | 1 | 2 | 3 | Total |
|---|---|---|---|---|
| Cases | 107 | 125 | 143 | 375 |
| Non-Visiting | 32 | 20 | 3 | 55 |

**SUMMARY:** Showing number and classification of patients in each District.

| | Total | Positive | Clinically Positive | Suspect | Contacts |
|---|---|---|---|---|---|
| DISTRICT ONE | 107 | 51 | 38 | 9 | 9 |
| DISTRICT TWO | 125 | 47 | 37 | 16 | 25 |
| DISTRICT THREE | 143 | 25 | 50 | 36 | 32 |

**District 1.** Includes all Ward One and part of Ward Two, North boundary being South side of William Avenue to Arlington Street, then Notre Dame to Western Limits.

**District 2.** Includes part of Wards Two and Three, North Limit Burrows South, East Limit Main Street, South Limit William Avenue West to Arlington Street and Notre Dame to West Limits.

**District 3.** North Limits to Burrows Avenue North and West. All East of Main Street to Market Avenue, including Elmwood.

Age incidence of cases and deaths notified during the year 1927, are as follows:

| Ages | Cases | Deaths |
|---|---|---|
| 0 — 10 | 13 | 1 |
| 11 — 20 | 26 | 7 |
| 21 — 30 | 69 | 18 |
| 31 — 40 | 42 | 18 |
| 41 — 50 | 27 | 12 |
| 51 — 60 | 14 | 6 |
| 61 — 70 | 8 | 7 |
| 71 — 80 | 2 | 5 |
| Unclassified | 4 | .... |
| Outside Cases | 24 | .... |
| Totals ..... | 229 | 74 |

## NURSES' REPORTS

Review of summary of monthly reports for the year show that 5,122 visits have been made to homes of patients. First visits totalled 187 with 4,811 subsequent calls.

### Chest Clinics

The number of persons attending the Winnipeg General Hospital Chest Clinics was, Day Clinic 845, Night Clinic 259, total 1,114, as compared with, Day Clinic 788, Night Clinic 265, total 1,053 for 1926.

Of the above total attending the Clinic, 544 examinations were made and 366 X-ray examinations given, representing a slight increase over the figures for last year.

The figures for the Clinic held at the Children's Hospital also show an increase in numbers of examinations and X-ray done during 1927; there being 457 against 415 for 1926, and 267 X-ray examinations against 253 for the preceding year.

This is a most important part of the nurse's work, her duties in the Clinic allow her the closest association with the prospective patient.

The attendance at these Clinics continue to show an increase from year to year, and every effort is put forth to get this branch of the work up to the highest standard of efficiency. The clinic held at the King Edward Memorial Hospital is attended to by the staff of that institution. Relief work is attended to by the Social Welfare and other organizations. The Department supplied refills, disinfectants, handkerchiefs and medical supplies. Nine thousand, three hundred and seventy quarts of milk were distributed to needy patients.

### Hospitalization of Cases of Communicable Disease

Under this heading we have once more to record our appreciation of the service given this Department by the staff of the Municipal Hospitals; to be able to find a bed in hospital at any time, day or night, must

necessarily tax the ingenuity of the staff, yet this is the service this Department continues to receive.

In conclusion we take this opportunity of recording our appreciation and thanks to those who have in any way assisted us in the conduct of our work. We are particularly indebted to the staff of the Margaret Scott Nursing Mission, the Social Welfare Commission, the Medical Inspection Department of Public Schools; the co-operation of these agencies has contributed largely to what success we have attained.

Yours obediently,

W. J. T. WATT,

Chief, Division of Communicable Diseases.

## COMMUNICABLE DISEASES—1927

| DISEASES | Jan. | | Feb. | | Mar. | | Apr. | | May | | June | | July | | Aug. | | Sept. | | Oct. | | Nov. | | Dec. | | Totals 1927 | | Totals 1926 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths |
| Typhoid Fever | 1 | .... | 6 | 1 | ..... | 1 | 2 | .... | 3 | 1 | 1 | .... | ..... | .... | 1 | .... | 3 | 2 | 7 | .... | 2 | .... | 1 | 1 | 27 | 6 | 66 | 8 |
| Smallpox | 4 | .... | 4 | .... | 1 | .... | 2 | .... | 6 | .... | 8 | .... | 6 | .... | 5 | .... | 4 | .... | 2 | .... | 3 | .... | 3 | .... | 48 | ..... | 43 | 2 |
| Chickenpox | 71 | .... | 56 | .... | 93 | .... | 115 | .... | 82 | .... | 153 | .... | 57 | .... | 24 | .... | 41 | .... | 76 | .... | 129 | .... | 121 | .... | 1,018 | ..... | 770 | 1 |
| Measles | 94 | .... | 51 | 1 | 60 | .... | 65 | 1 | 57 | .... | 91 | .... | 17 | .... | 7 | 1 | 3 | .... | 3 | .... | 6 | .... | 2 | .... | 456 | 3 | 2,844 | 11 |
| Scarlet Fever | 100 | 2 | 75 | .... | 92 | 1 | 75 | .... | 48 | 1 | 100 | .... | 64 | .... | 29 | .... | 54 | 1 | 84 | .... | 67 | .... | 97 | 1 | 885 | 6 | 676 | 8 |
| Whooping Cough | 39 | 1 | 31 | .... | 84 | .... | 48 | .... | 57 | .... | 51 | 1 | 32 | .... | 37 | 2 | 28 | .... | 45 | 3 | 19 | .... | 5 | .... | 476 | 7 | 422 | 6 |
| Mumps | 53 | .... | 29 | .... | 58 | .... | 35 | .... | 40 | .... | 25 | .... | 1 | .... | 2 | .... | 11 | .... | 4 | .... | 17 | .... | 15 | .... | 290 | ..... | 1,506 | ..... |
| Diphtheria | 31 | 2 | 37 | 4 | 41 | 1 | 32 | 3 | 38 | 1 | 64 | 4 | 35 | 4 | 36 | 2 | 58 | 3 | 74 | 4 | 45 | 1 | 51 | 5 | 542 | 34 | 554 | 20 |
| Diphtheria Carriers | 16 | .... | 2 | .... | 11 | .... | 7 | .... | 1 | .... | 14 | .... | 20 | .... | 14 | .... | 9 | .... | 23 | .... | 21 | .... | 4 | .... | 142 | ..... | 107 | ..... |
| Erysipelas | 13 | 1 | 12 | 1 | 13 | 1 | 6 | 1 | 13 | .... | 4 | .... | 3 | .... | 2 | 1 | 5 | .... | 5 | 1 | 10 | .... | 7 | 1 | 93 | 7 | 90 | 14 |
| Tuberculosis, Pul | 10 | 8 | 20 | 6 | 23 | 7 | 24 | 4 | 27 | 4 | 12 | 5 | 11 | 8 | 33 | 4 | 15 | 4 | 14 | 8 | 22 | 11 | 18 | 5 | 229 | 74 | 232 | 88 |
| Poliomyelitis, A. | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | 3 | 1 | 1 | .... | ..... | .... | ..... | .... | 4 | 1 | ..... | ..... |
| Meningitis, C.S. | ..... | .... | 1 | 1 | 1 | 1 | ..... | .... | 2 | .... | 1 | .... | 1 | .... | 1 | .... | ..... | .... | 1 | .... | ..... | .... | ..... | .... | 8 | 2 | 1 | 1 |
| Influenza | 5 | 6 | 17 | 17 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | ..... | .... | ..... | .... | 4 | 4 | 2 | 2 | 6 | 6 | 42 | 42 | 31 | 31 |
| Encephalitis, Leth. | ..... | .... | ..... | .... | ..... | .... | 2 | 3 | 1 | .... | ..... | .... | 1 | 1 | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | 4 | 4 | 7 | 7 |
| Puerperal Sep. | 1 | 1 | 1 | 1 | 2 | 2 | ..... | .... | 1 | 1 | ..... | .... | 1 | 1 | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | 6 | 6 | 7 | 7 |
| Totals | 438 | 21 | 342 | 32 | 481 | 16 | 415 | 13 | 377 | 10 | 526 | 11 | 250 | 15 | 191 | 10 | 234 | 11 | 343 | 20 | 343 | 14 | 330 | 19 | 4,270 | 192 | 7,356 | 204 |

## COMMUNICABLE DISEASES RATES

| | 1927 | | | | 1926 | | | | 1925 | | | | 1924 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases | Deaths | Rate per 100,000 | Rate per 100 Cases | Cases | Deaths | Rate per 100,000 | Rate per 100 Cases | Cases | Deaths | Rate per 100,000 | Rate per 100 Cases | Cases | Deaths | Rate per 100,000 | Rate per 100 Cases |
| Diphtheria | 542 | 34 | 17.1 | 6.2 | 545 | 20 | 10.1 | 3.6 | 515 | 26 | 13.3 | 5.04 | 885 | 22 | 11.2 | 2.4 |
| Scarlet Fever | 885 | 6 | 3.0 | 6.7 | 676 | 8 | 4.0 | 1.1 | 645 | 8 | 4.09 | 1.2 | 583 | 11 | 5.6 | 1.8 |
| Measles | 456 | 3 | 1.5 | .6 | 2,844 | 11 | 5.5 | .3 | 2,411 | 9 | 4.6 | .37 | 913 | 4 | 2. | .4 |
| Whooping Cough | 476 | 7 | 3.5 | 1.4 | 422 | 6 | 3.0 | 1.4 | 689 | 14 | 7.17 | 2.03 | 430 | 7 | 3.5 | 1.6 |
| Typhoid Fever | 27 | 6 | 3.0 | 22.2 | 66 | 8 | 4.0 | 12.1 | 42 | 6 | 3.07 | 14.3 | 36 | 6 | 3. | 16.6 |
| Typhoid Fever Corrected | | 3 | 1.5 | | | 2 | 1. | | | 2 | 1. | | | 1 | 1.02 | |
| Tuberculosis of Lungs | 229 | 74 | 37.2 | 32.3 | 232 | 88 | 44.6 | 37.5 | 183 | 81 | 41.54 | 44.2 | 183 | 87 | 44.6 | 47.5 |
| Tuberculosis,.all Forms | | 93 | 46.7 | | | 116 | 58.3 | | | 104 | 53.2 | | | 120 | 61.5 | |
| Influenza | 42 | 42 | | | 31 | 31 | | | 33 | 31 | 15.8 | | 26 | 25 | 12.8 | |
| Erysipelas | 93 | 7 | 3.5 | 7.5 | 90 | 14 | 7.1 | 15.5 | 57 | 5 | | | 68 | 7 | | |
| Smallpox | 48 | | | | 43 | 2 | 1. | 4.6 | 41 | | | | 126 | | | |
| Puerperal Fever | 6 | 6 | | | 7 | 7 | | | 8 | 8 | | | 10 | 8 | | |
| Cerebro Spinal Meningitis | 8 | 2 | | | 1 | 1 | | | 1 | 1 | | | 8 | 7 | | |
| Anterior Poliomyelitis | 4 | 1 | | | | | | | 1 | 1 | | | 13 | 3 | | |
| Lethargic Encephalitis | 4 | 4 | | | 7 | 7 | | | 7 | 5 | | | 11 | 10 | | |
| Diphtheria Carrier | 140 | | | | 107 | | | | 101 | | | | 429 | | | |
| Mumps | 290 | | | | 1,506 | | | | 436 | | | | 10 | | | |
| Chickenpox | 1,018 | | | | 770 | 1 | | | 662 | | | | 1,120 | | | |

**DEATHS—1927**

| DISEASES | Ward 1 | Ward 2 | Ward 3 | Outside | Institutional | Totals 1927 |
|---|---|---|---|---|---|---|
| Typhoid Fever | 1 | 2 | 2 | 1 | .... | 6 |
| Smallpox | .... | .... | .... | .... | .... | .... |
| Measles | .... | 1 | 2 | .... | .... | 3 |
| Scarlet Fever | 3 | 2 | .... | 1 | .... | 6 |
| Whooping Cough | 1 | 3 | .... | 3 | .... | 7 |
| Diphtheria | 3 | 15 | 6 | 9 | 1 | 34 |
| Erysipelas | .... | 4 | 1 | 2 | .... | 7 |
| Tuberculosis, Pul. | 9 | 26 | 28 | 11 | .... | 74 |
| Meningitis, C.S. | .... | .... | 1 | 1 | .... | 2 |
| Influenza | 13 | 14 | 12 | 3 | .... | 42 |
| Encephalitis, Leth. | 1 | 1 | 1 | 1 | .... | 4 |
| Poliomyelitis, A. | .... | 1 | .... | .... | .... | 1 |
| Puerperal Fever | 1 | 1 | 2 | 2 | .... | 6 |
| Para Typhoid | .... | .... | .... | 1 | .... | 1 |

## SCARLET FEVER—1927

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total 1927 | Total 1926 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Scarlet Fever Cases | 100 | 75 | 92 | 75 | 48 | 100 | 64 | 29 | 54 | 84 | 67 | 97 | 885 | 676 |
| Secondary Cases | 22 | 11 | 15 | 9 | .... | 7 | 5 | 1 | 4 | 14 | 6 | 21 | 115 | 115 |
| Return Cases | .... | 1 | 3 | 2 | .... | .... | .... | .... | .... | .... | 1 | 2 | 9 | 6 |
| Missed Cases | 7 | 3 | 4 | 2 | .... | 3 | 1 | .... | 2 | 6 | 1 | 7 | 36 | 35 |
| Institutional Cases | 5 | 11 | 9 | 5 | 5 | .... | 3 | .... | 1 | .... | 1 | 11 | 51 | 25 |
| Outside Cases | 6 | 8 | 8 | 9 | 6 | 2 | 15 | 6 | 8 | 14 | 15 | 10 | 107 | 64 |
| School Children | 40 | 23 | 32 | 32 | 26 | 78 | 25 | 9 | 27 | 39 | 27 | 37 | 395 | 316 |
| Sec'y to School Children | 16 | 7 | 5 | 7 | .... | 5 | 3 | .... | .... | 11 | 5 | 14 | 73 | 86 |
| Under School Age | 17 | 10 | 18 | 16 | 8 | 7 | 12 | 9 | 10 | 12 | 13 | 14 | 146 | 114 |
| Sec'y to Under School age | 3 | 4 | 6 | 1 | .... | 2 | 1 | 1 | 4 | 2 | 1 | 5 | 30 | 24 |
| Adults | 11 | 10 | 10 | 4 | 3 | 6 | 4 | 3 | 4 | 3 | 5 | 6 | 69 | 57 |
| Secondary to Adults | 3 | 2 | 4 | 1 | .... | .... | 1 | .... | .... | 1 | .... | .... | 12 | 5 |
| Suspects | 4 | 5 | 5 | 1 | 2 | 5 | 3 | 4 | 2 | 9 | 7 | 6 | 53 | 43 |

## DIPHTHERIA—1927

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals 1927 | Totals 1926 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diphtheria Cases | 31 | 37 | 41 | 32 | 38 | 64 | 35 | 36 | 58 | 74 | 45 | 51 | 542 | 554 |
| Diphtheria Carriers | 16 | 2 | 11 | 7 | 1 | 14 | 20 | 14 | 9 | 23 | 21 | 4 | 142 | 107 |
| Secondary Cases | 6 | 4 | 2 | 2 | 2 | 5 | 1 | 1 | 4 | 11 | 9 | 5 | 52 | 48 |
| Return Cases | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | 1 | 4 |
| Unrecognized Cases | 3 | 4 | 3 | 5 | 2 | 2 | 3 | 2 | 1 | 6 | 3 | 2 | 36 | 22 |
| Outside Cases | 7 | 5 | 8 | 6 | 6 | 2 | 7 | 14 | 8 | 3 | 1 | 12 | 79 | 86 |
| Institutional Cases | 3 | 3 | 3 | 2 | 8 | 5 | 6 | 6 | 8 | 6 | 3 | 2 | 55 | 80 |
| Institutional Carriers | 3 | 1 | 3 | 5 | 1 | .... | 8 | .... | 4 | 5 | .... | .... | 30 | 27 |
| Suspects | 2 | 1 | 3 | 3 | 4 | 5 | 3 | 2 | 2 | 1 | 3 | 1 | 30 | 24 |

## DIPHTHERIA DEATHS 1927

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | 1927 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ward I | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 1 | 3 |
| Ward II | 2 | 1 | ... | 2 | 1 | 4 | 3 | ... | ... | 1 | ... | 1 | 15 |
| Ward III | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | 2 | 6 |
| Outside | ... | 2 | 1 | 1 | ... | ... | 1 | ... | ... | 2 | 1 | 1 | 9 |
| Institutional | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Totals | 2 | 4 | 1 | 3 | 1 | 4 | 4 | 2 | 3 | 4 | 1 | 5 | 34 |

### AGES

| | | | |
|---|---|---|---|
| Under 1 year | 1 | 6½ years | 1 |
| 1 year | 2 | 7 " | 4 |
| 2 years | 2 | 8 " | 2 |
| 3 " | 3 | 9 " | ... |
| 4 " | 4 | 10 " | 3 |
| 5 " | 4 | 11 " | 1 |
| 6 " | 5 | 13 " | 1 |

One Adult—43 years ..... 1

## TUBERCULOSIS—1927

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals 1927 | Totals 1926 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| King Edward M. Hospital | 3 | 8 | 5 | 8 | 10 | 4 | 4 | 6 | 4 | 6 | 6 | 2 | 66 | 62 |
| Ninette Sanatorium | ---- | 1 | 5 | 1 | 1 | ---- | ---- | 13 | ---- | 1 | 5 | 2 | 29 | 31 |
| Clinics | 1 | 3 | 7 | 6 | 11 | 3 | ---- | 8 | 2 | 2 | 5 | 10 | 58 | 59 |
| Death Sheet | 3 | 2 | 2 | 2 | ---- | ---- | 1 | 2 | ---- | 1 | 3 | 1 | 17 | 20 |
| City Laboratory | ---- | 2 | 2 | 2 | 1 | ---- | ---- | 1 | ---- | 1 | ---- | ---- | 9 | 18 |
| St. Roch's Hospital | 1 | ---- | ---- | 4 | 1 | ---- | 2 | 1 | 2 | 1 | 1 | 2 | 15 | 19 |
| Doctors and Others | ---- | ---- | 1 | ---- | ---- | 3 | 1 | ---- | 6 | ---- | ---- | ---- | 11 | 9 |
| Outside Cases | 2 | 4 | 1 | 1 | 3 | 2 | 3 | 2 | 1 | 2 | 2 | 1 | 24 | 14 |
| Tuberculosis Cases | 10 | 20 | 23 | 24 | 27 | 12 | 11 | 33 | 15 | 14 | 22 | 18 | 229 | 232 |
| Tuberculosis Deaths | 8 | 6 | 7 | 4 | 4 | 5 | 8 | 4 | 4 | 8 | 11 | 5 | 74 | 88 |
| Milk Supplied, No. of Quarts | 766 | 756 | 870 | 822 | 789 | 719 | 760 | 733 | 733 | 806 | 795 | 821 | 9,370 | 10,561 |
| Patients | 24 | 27 | 28 | 27 | 27 | 26 | 25 | 33 | 27 | 26 | 27 | 27 | ---- | ---- |

## TUBERCULOSIS NURSES' REPORT 1927

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals 1927 | Totals 1926 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Visits | 295 | 401 | 500 | 412 | 447 | 434 | 370 | 368 | 439 | 559 | 458 | 439 | 5,122 | 5,198 |
| To Old Cases | 264 | 380 | 483 | 371 | 417 | 421 | 338 | 339 | 422 | 527 | 425 | 424 | 4,811 | 4,884 |
| To New Cases | 8 | 15 | 17 | 19 | 24 | 9 | 8 | 29 | 16 | 10 | 22 | 10 | 187 | 193 |
| On Behalf of Patients | 2 | 3 | .... | 2 | 4 | 1 | .... | .... | .... | 1 | 5 | 1 | 19 | 61 |
| Other Calls | 21 | 3 | .... | 20 | 2 | 3 | 24 | .... | 1 | 21 | 6 | 4 | 105 | 60 |
| Patients sent to King Edward Hospital | 3 | 4 | 8 | 9 | 6 | 5 | 4 | 3 | 4 | 6 | 6 | 2 | 60 | 41 |
| Patients sent to St. Roch's Hospital | 1 | .... | .... | 3 | .... | .... | .... | 2 | .... | 2 | 2 | .... | 10 | 8 |
| Patients sent to Ninette Sanatorium | .... | 1 | 1 | 4 | 1 | 4 | 1 | 1 | 1 | .... | .... | 1 | 15 | 7 |
| Suspects | .... | 2 | 1 | 7 | 1 | 2 | 2 | 1 | 1 | 1 | 6 | .... | 24 | 51 |
| Relief Given | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | ..... | 7 |

## TUBERCULOSIS—1927

| Rooms Occupied by One Family | PATIENTS | | | | CONTACTS | | | |
|---|---|---|---|---|---|---|---|---|
| | With Room to Self | With Bed But Not Room to Self | With Neither Bed Nor Room to Self | Totals | Total Number of Contacts in Home | Sleeping in Same Bed as Patient | Sleeping in Same Room but Separate Bed | Totals |
| 1 Room | 9 | 7 | 8 | 24 | 26 | 6 | 19 | 25 |
| 2 Rooms | 1 | .... | 6 | 7 | 12 | 3 | 1 | 4 |
| 3 Rooms | 6 | 1 | 14 | 21 | 67 | 19 | 15 | 34 |
| 4 Rooms and Over | 85 | 12 | 43 | 140 | 605 | 59 | 39 | 98 |
| Totals | 101 | 20 | 71 | 192 | 710 | 87 | 74 | 161 |

## WINNIPEG GENERAL HOSPITAL TUBERCULOSIS CLINIC—1927

| | Jan. | | Feb. | | Mar. | | April | | May | | June | | July | | Aug. | | Sept. | | Oct. | | Nov. | | Dec. | | Totals 1927 | | Totals 1926 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night |
| Cases | 62 | 18 | 72 | 15 | 79 | 14 | 65 | 29 | 64 | 25 | 49 | 19 | 106 | 28 | 95 | 28 | 102 | 16 | 42 | 14 | 55 | 31 | 54 | 22 | 845 | 259 | 788 | 265 |
| Old Cases | 46 | 10 | 55 | 7 | 55 | 5 | 45 | 15 | 41 | 14 | 38 | 13 | 73 | 13 | 58 | 16 | 78 | 8 | 29 | 6 | 33 | 19 | 23 | 12 | 574 | 138 | 535 | 142 |
| New Cases | 16 | 8 | 17 | 8 | 24 | 9 | 20 | 14 | 23 | 11 | 11 | 6 | 33 | 15 | 37 | 12 | 24 | 8 | 13 | 8 | 22 | 12 | 31 | 10 | 271 | 121 | 253 | 123 |
| Men | 32 | 4 | 42 | 6 | 41 | 8 | 26 | 6 | 25 | 10 | 18 | 11 | 22 | 8 | 33 | 10 | 27 | 4 | 14 | 6 | 20 | 16 | 14 | 7 | 314 | 96 | 268 | 102 |
| Women | 27 | 10 | 26 | 6 | 38 | 6 | 31 | 17 | 35 | 13 | 31 | 8 | 70 | 17 | 48 | 15 | 65 | 12 | 18 | 8 | 21 | 15 | 32 | 15 | 442 | 142 | 392 | 154 |
| Children | 3 | 4 | 4 | 3 | ..... | ..... | 8 | 6 | 4 | 2 | ..... | ..... | 14 | 3 | 14 | 3 | 10 | ..... | 10 | ..... | 14 | ..... | 8 | ..... | 89 | 21 | 128 | 9 |
| Examinations | 29 | 15 | 29 | 12 | 29 | 5 | 46 | 19 | 29 | 18 | 15 | 9 | 46 | 19 | 40 | 14 | 39 | 5 | 22 | 11 | 35 | 16 | 30 | 12 | 389 | 155 | 348 | 185 |
| X-Ray Examinations | 22 | 3 | 22 | 5 | 24 | 8 | 15 | 9 | 14 | 11 | 10 | 5 | 48 | 12 | 41 | 11 | 43 | 7 | 8 | 4 | 12 | 10 | 13 | 9 | 272 | 94 | 238 | 95 |

## CHILDREN'S HOSPITAL TUBERCULOSIS CLINIC—1927

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total 1927 | Total 1926 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cases | 75 | 55 | 88 | 68 | 96 | 67 | 40 | 55 | 27 | 48 | 69 | 40 | 728 | 733 |
| Old Cases | 53 | 29 | 56 | 46 | 53 | 57 | 27 | 45 | 24 | 33 | 38 | 26 | 487 | 484 |
| New Cases | 22 | 26 | 32 | 22 | 43 | 10 | 13 | 10 | 3 | 15 | 31 | 14 | 241 | 249 |
| Examinations | 54 | 42 | 47 | 52 | 48 | 35 | 25 | 28 | 17 | 28 | 51 | 30 | 457 | 415 |
| X-Ray Examinations | 30 | 14 | 30 | 25 | 41 | 22 | 17 | 21 | 8 | 12 | 26 | 21 | 267 | 253 |

## SCHICK TEST AND TOXOID ADMINISTRATION IN SCHOOLS—1927

| SCHOOLS | Total Schick | | | Positive | | | Negative | | | Toxoid Completed | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1927 | 1926 | 1923–5 | 1927 | 1926 | 1923–5 | 1927 | 1926 | 1923–5 | 1927 | 1926 | 1923–5 |
| **Ward 1.** | | | | | | | | | | | | |
| Wolseley | 43 | 61 | 82 | 30 | 43 | 52 | 11 | 18 | 30 | 28 | 42 | 42 |
| Laura Secord | 40 | 93 | 152 | 28 | 71 | 121 | 11 | 22 | 31 | 25 | 69 | 116 |
| River Heights | 57 | 43 | 63 | 22 | 34 | 43 | 33 | 6 | 20 | 16 | 29 | 39 |
| Sir John Franklin | 31 | 31 | 32 | 20 | 15 | 19 | 9 | 11 | 13 | 15 | 15 | 14 |
| Mulvey | 51 | 90 | 113 | 28 | 71 | 76 | 22 | 14 | 37 | 24 | 68 | 60 |
| Carlton | 54 | 85 | 155 | 35 | 60 | 112 | 15 | 23 | 39 | 29 | 52 | 92 |
| Lord Roberts | 159 | 119 | 208 | 95 | 76 | 152 | 59 | 34 | 56 | 74 | 69 | 140 |
| Gladstone | 59 | 54 | 75 | 45 | 40 | 59 | 14 | 12 | 16 | 30 | 35 | 46 |
| Earl Grey | 52 | 72 | 131 | 29 | 61 | 81 | 23 | 10 | 50 | 27 | 50 | 72 |
| La Verendrye | 77 | 82 | 111 | 41 | 65 | 79 | 33 | 15 | 32 | 33 | 59 | 65 |
| Fort Rouge | 24 | 24 | 46 | 17 | 13 | 42 | 7 | 8 | 4 | 9 | 13 | 36 |
| Grosvenor | 65 | 58 | 71 | 27 | 47 | 54 | 34 | 10 | 17 | 20 | 42 | 44 |
| St. Ignatius | 28 | 30 | 51 | 8 | 22 | 44 | 17 | 5 | 7 | 6 | 18 | 33 |
| St. Mary's | 46 | 60 | ..... | 43 | 33 | ..... | 3 | 24 | ..... | 36 | 24 | ..... |
| Riverview | 75 | 59 | 124 | 64 | 34 | 97 | 11 | 16 | 22 | 37 | 28 | 79 |
| Totals | 861 | 961 | 1514 | 532 | 695 | 1031 | 302 | 236 | 374 | 409 | 613 | 878 |

## SCHICK TEST AND TOXOID ADMINISTRATION IN SCHOOLS—1927

| SCHOOLS | Total Schick | | | Positive | | | Negative | | | Toxoid Completed | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1927 | 1926 | 1923–5 | 1927 | 1926 | 1923–5 | 1927 | 1926 | 1923–5 | 1927 | 1926 | 1923–5 |
| **Ward 2.** | | | | | | | | | | | | |
| Cecil Rhodes | 103 | 105 | 198 | 52 | 80 | 147 | 35 | 18 | 49 | 50 | 77 | 112 |
| Greenway | 66 | 103 | 149 | 39 | 80 | 116 | 24 | 19 | 33 | 35 | 75 | 81 |
| John M. King | 88 | 139 | 172 | 52 | 75 | 98 | 29 | 54 | 74 | 41 | 67 | 92 |
| Pinkham | 76 | 83 | 161 | 37 | 66 | 84 | 35 | 17 | 77 | 32 | 61 | 56 |
| Principal Sparling | 71 | 128 | 159 | 39 | 76 | 104 | 31 | 50 | 49 | 34 | 67 | 94 |
| Ellen Street Kindergarten | 31 | 32 | .... | 12 | 17 | .... | 19 | 15 | .... | 11 | 17 | .... |
| Albert | 71 | 87 | 128 | 35 | 54 | 85 | 20 | 28 | 43 | 32 | 52 | 75 |
| Isbister | 59 | 123 | 111 | 41 | 63 | 75 | 15 | 42 | 36 | 38 | 60 | 51 |
| Montcalm | 17 | 46 | 98 | 8 | 38 | 72 | 9 | 8 | 25 | 8 | 37 | 58 |
| General Wolfe | 41 | 85 | 161 | 21 | 65 | 82 | 19 | 20 | 62 | 17 | 57 | 82 |
| Isaac Brock | 73 | 97 | 129 | 50 | 69 | 101 | 13 | 19 | 28 | 45 | 53 | 83 |
| Argyle | 49 | 61 | 81 | 19 | 42 | 48 | 29 | 18 | 32 | 15 | 36 | 41 |
| Wellington | 70 | 85 | 135 | 43 | 58 | 79 | 16 | 24 | 56 | 40 | 53 | 66 |
| Somerset | 42 | 77 | 122 | 18 | 46 | 180 | 12 | 31 | 42 | 14 | 43 | 73 |
| Victoria | 9 | 13 | 73 | 5 | 9 | 42 | 3 | 4 | 30 | 5 | 8 | 39 |
| Dufferin | 62 | 119 | 236 | 21 | 64 | 146 | 41 | 53 | 90 | 20 | 60 | 116 |
| St. Edwards | 83 | 83 | .... | 48 | 32 | .... | 25 | 51 | .... | 35 | 27 | .... |
| Totals | 1011 | 1466 | 2113 | 540 | 934 | 1459 | 375 | 471 | 693 | 472 | 848 | 1119 |

## SCHICK TEST AND TOXOID ADMINISTRATION IN SCHOOLS—1927

| SCHOOLS | Total Schick | | | Positive | | | Negative | | | Toxoid Completed | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1927 | 1926 | 1923–5 | 1927 | 1926 | 1923–5 | 1927 | 1926 | 1923–5 | 1927 | 1926 | 1923–5 |
| **Ward 3.** | | | | | | | | | | | | |
| Machray | 102 | 140 | 216 | 25 | 75 | 140 | 59 | 62 | 76 | 23 | 68 | 110 |
| William Whyte | 109 | 139 | 263 | 46 | 73 | 149 | 62 | 66 | 114 | 44 | 61 | 141 |
| David Livingstone | 118 | 188 | 242 | 81 | 122 | 105 | 37 | 65 | 137 | 71 | 114 | 93 |
| King Edward | 139 | 162 | 505 | 77 | 85 | 288 | 55 | 77 | 217 | 67 | 83 | 219 |
| Aberdeen | 104 | 177 | 271 | 74 | 102 | 149 | 25 | 75 | 122 | 63 | 83 | 125 |
| Margaret Scott | 58 | 94 | 258 | 33 | 63 | 143 | 23 | 27 | 104 | 27 | 57 | 115 |
| Sir Sam Steele | 23 | 36 | 73 | 13 | 30 | 45 | 8 | 6 | 28 | 12 | 29 | 32 |
| George V. | 29 | 30 | 87 | 22 | 20 | 50 | 7 | 9 | 37 | 21 | 18 | 41 |
| Champlain | 45 | 50 | 141 | 3 | 35 | 77 | 41 | 13 | 64 | 3 | 29 | 58 |
| Norquay | 142 | 228 | 446 | 71 | 128 | 245 | 61 | 86 | 201 | 66 | 113 | 203 |
| Strathcona | 136 | 161 | 534 | 51 | 101 | 306 | 83 | 60 | 228 | 51 | 92 | 288 |
| Lord Nelson | 68 | 84 | 158 | 39 | 44 | 65 | 26 | 40 | 93 | 33 | 41 | 53 |
| Florence Nightingale | 33 | 10 | 73 | 20 | 5 | 52 | 8 | 5 | 21 | 17 | 4 | 47 |
| Ralph Brown | 77 | 96 | 213 | 40 | 71 | 161 | 34 | 20 | 52 | 31 | 68 | 102 |
| Luxton | 50 | 84 | 159 | 24 | 53 | 78 | 20 | 21 | 81 | 21 | 45 | 64 |
| Anna Gibson | 24 | 38 | 35 | 16 | 26 | 27 | 7 | 10 | 8 | 11 | 24 | 24 |
| Lord Selkirk | 84 | 114 | 202 | 59 | 76 | 141 | 24 | 33 | 61 | 54 | 68 | 116 |
| Faraday | 90 | 112 | 192 | 36 | 79 | 111 | 44 | 23 | 91 | 32 | 73 | 73 |
| Elmwood | 29 | 30 | 93 | 21 | 24 | 53 | 8 | 5 | 40 | 17 | 21 | 45 |
| Peretz | 28 | 62 | .... | 20 | 41 | .... | 8 | 21 | .... | 17 | 35 | .... |
| Liberty Temple | 17 | .... | .... | 10 | .... | .... | 6 | .... | .... | 4 | .... | .... |
| Totals | 1505 | 2035 | 4161 | 781 | 1253 | 2385 | 646 | 724 | 1772 | 685 | 1126 | 1949 |

## REPORT OF SCHOOL MEDICAL INSPECTION SERVICE ON COMMUNICABLE DISEASES

**Affecting Schools December 31st, 1926, to December 31st, 1927**

Furnished by courtesy of Dr. Mary Crawford.

| | |
|---|---|
| School Population 1927 | 41,332 |
| School Children suffering from communicable diseases | 1,565 |
| Total percentage discovered by Nurses | 54.82% |

These cases are classfied as follows:

| DISEASES | School Children | Discovered by Nurses | |
|---|---|---|---|
| | | Number | Percentage of School Children |
| Scarlet Fever | 342 | 64 | 18.71% |
| Measles | 82 | 38 | 46.34% |
| German Measles | 5 | 4 | 80.00% |
| Mumps | 215 | 177 | 82.30% |
| Chickenpox | 566 | 367 | 64.82% |
| Whooping Cough | 165 | 152 | 99.00% |
| Throat Carrier | 35 | 28 | 80.00% |
| Nose Carrier | 14 | 14 | 100.00% |
| Ear Carrier | 1 | 1 | 100.00% |
| Clinical Throat | 136 | 23 | 17.00% |
| Anterior Poliomyelitis | 2 | ------- | ------- |

## INSPECTOR'S REPORT—1927

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals 1927 | Totals 1926 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Visits | 517 | 435 | 602 | 571 | 743 | 841 | 436 | 306 | 564 | 538 | 592 | 551 | 6696 | 9886 |
| Houses Quarantined | 305 | 219 | 330 | 289 | 278 | 424 | 167 | 126 | 173 | 264 | 296 | 234 | 3105 | 5319 |
| Quarantines Raised | 73 | 63 | 55 | 79 | 52 | 107 | 69 | 36 | 41 | 39 | 44 | 42 | 700 | 861 |
| Quarantines Inspected | 58 | 41 | 120 | 73 | 108 | 111 | 89 | 63 | 64 | 97 | 97 | 100 | 1021 | 901 |
| Other Calls | 81 | 112 | 97 | 130 | 305 | 199 | 111 | 81 | 286 | 138 | 155 | 175 | 1870 | 2805 |
| New Cases Investigated | 352 | 256 | 384 | 328 | 297 | 463 | 183 | 146 | 189 | 305 | 320 | 255 | 3478 | 5833 |
| Rooms Fumigated | 6 | 6 | 2 | 6 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 4 | 37 | 68 |
| Houses Fumigated | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 1 |
| Special Reports | 5 | 5 | 3 | .... | 1 | 2 | 4 | 2 | 3 | 4 | 3 | 6 | 38 | 32 |
| Sanitary Defects Reported | .... | 3 | 3 | 2 | 4 | 2 | .... | 1 | 4 | 1 | 2 | .... | 22 | 74 |
| Linen Disinfected | 105 | 103 | 123 | 128 | 96 | 164 | 97 | 58 | 104 | 124 | 121 | 111 | 1334 | 1165 |
| Rooms Sprayed | 5 | 24 | 16 | 14 | 14 | 14 | 11 | 4 | 29 | 3 | 18 | 22 | 174 | 181 |
| Houses Sprayed | 3 | .... | 1 | 2 | 2 | 1 | .... | .... | .... | .... | 1 | .... | 10 | 16 |

# Report of Chief Health Inspector

A. J. Douglas, Esq., M.D.,
Medical Health Officer.

Dear Sir:

I have the honour to submit herewith a report of the work accomplished in this Division of the Health Department, as set forth in my own report, and in those of the Tenement and Smoke Inspectors, as follows:

## Abatement of Nuisances

The table which follows sets forth in concise form a summary of the work done by the inspectors of this division.

The total number of inspections and re-inspections was 41,288 or 1,621 more than last year. This equals 4,128 for each of the ten district inspectors.

Complaints numbered 2,920 or 296 more than in 1926. Over 400 of these complaints were unfounded, or were rectified before receipt of the same.

## SANITARY INSPECTIONS FOR THE YEAR 1927

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Complaints received in office | 120 | 109 | 194 | 225 | 236 | 249 | 149 | 163 | 187 | 152 | 112 | 124 | 2020 |
| Complaints made to Inspector | 51 | 72 | 81 | 86 | 92 | 79 | 65 | 77 | 79 | 77 | 67 | 74 | 900 |
| Total | 171 | 181 | 275 | 311 | 328 | 328 | 214 | 240 | 266 | 229 | 179 | 198 | 2920 |
| Of Above: | | | | | | | | | | | | | |
| Complaints re non-removal of garbage, etc. | 42 | 37 | 44 | 53 | 49 | 46 | 38 | 32 | 41 | 30 | 29 | 30 | 471 |
| Complaints re nuisances, etc. | 129 | 144 | 231 | 258 | 279 | 282 | 176 | 208 | 225 | 199 | 150 | 168 | 2449 |
| Total | 171 | 181 | 275 | 311 | 328 | 328 | 214 | 240 | 266 | 229 | 179 | 198 | 2920 |
| Complaints well founded | 150 | 153 | 247 | 257 | 282 | 289 | 175 | 211 | 233 | 199 | 143 | 173 | 2512 |
| Complaints unfounded or rectified previous to receipt of same | 21 | 28 | 28 | 54 | 46 | 39 | 39 | 29 | 33 | 30 | 36 | 25 | 408 |
| Total | 171 | 181 | 275 | 311 | 328 | 328 | 214 | 240 | 266 | 229 | 179 | 198 | 2920 |
| Written notices (informal) | 283 | 225 | 206 | 221 | 460 | 579 | 474 | 471 | 346 | 437 | 333 | 370 | 4405 |
| Written notices (statutory) | 109 | 101 | 191 | 272 | 222 | 166 | 122 | 132 | 168 | 166 | 116 | 111 | 1876 |
| Verbal notices or warnings | 619 | 702 | 899 | 692 | 1050 | 950 | 797 | 777 | 870 | 647 | 762 | 617 | 9382 |
| Total | 1011 | 1028 | 1296 | 1185 | 1732 | 1695 | 1393 | 1380 | 1384 | 1250 | 1211 | 1098 | 15663 |
| **INSPECTIONS MADE** | | | | | | | | | | | | | |
| Dwelling Houses | 218 | 157 | 147 | 157 | 190 | 153 | 130 | 133 | 147 | 155 | 122 | 486 | 2195 |
| Tenement and apartment blocks | 127 | 99 | 97 | 95 | 91 | 104 | 110 | 79 | 93 | 99 | 107 | 491 | 1592 |
| Hotels and lodging houses | 15 | 25 | 60 | 19 | 75 | 52 | 17 | 12 | 27 | 15 | 24 | 11 | 352 |
| Schools and public buildings | 6 | 1 | 2 | 1 | 3 | .... | .... | 1 | 4 | 2 | 5 | .... | 25 |

## SANITARY INSPECTIONS FOR THE YEAR 1927—Continued

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abattoirs | 3 | 2 | 4 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 27 |
| Workshops and factories | 39 | 48 | 51 | 35 | 39 | 30 | 27 | 29 | 34 | 47 | 48 | 41 | 468 |
| Offices | 2 | 8 | 14 | 1 | 9 | 2 | 1 | 4 | 5 | 8 | 8 | 12 | 74 |
| Restaurants and stores | 48 | 52 | 73 | 68 | 65 | 72 | 59 | 70 | 77 | 75 | 72 | 80 | 811 |
| Stables, livery, feed and sale | 32 | 38 | 29 | 29 | 26 | 34 | 20 | 29 | 76 | 37 | 28 | 25 | 403 |
| Stables, private | 119 | 131 | 134 | 137 | 147 | 150 | 95 | 104 | 152 | 167 | 196 | 112 | 1644 |
| Laundries, hand | 59 | 53 | 46 | 106 | 81 | 73 | 42 | 38 | 36 | 52 | 50 | 50 | 686 |
| Laundries, steam | 5 | 4 | 3 | 12 | 3 | 2 | 2 | 1 | 3 | 1 | 8 | 3 | 47 |
| Dog kennels | 14 | 13 | 14 | 24 | 23 | 30 | 14 | 8 | 16 | 13 | 13 | 13 | 195 |
| Theatres and places of amusement | 10 | 9 | 3 | 5 | 6 | 8 | 5 | 5 | 4 | 7 | 7 | 5 | 74 |
| Public bath houses | 4 | 5 | 4 | 6 | 8 | 6 | 6 | 6 | 8 | 10 | 4 | 4 | 71 |
| Public bath houses, water samples | 8 | 8 | 12 | 8 | 14 | 12 | 12 | 14 | 12 | 10 | 5 | 5 | 120 |
| Comfort stations, public | 20 | 20 | 20 | 20 | 24 | 22 | 17 | 19 | 23 | 20 | 20 | 20 | 245 |
| Maternity and Infants' homes | ---- | ---- | 1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 1 |
| Hospitals, private | 1 | ---- | 1 | 2 | 4 | 2 | ---- | ---- | ---- | ---- | ---- | ---- | 10 |
| Common drinking cups and towels | 5 | 8 | 10 | 5 | 13 | 7 | 6 | 2 | 5 | 5 | 8 | 5 | 79 |
| Barber shops | 16 | 9 | 10 | 7 | 11 | 16 | 9 | 10 | 11 | 11 | 12 | 11 | 133 |
| Second-hand stores and junk yards | 25 | 22 | 20 | 107 | 52 | 30 | 24 | 24 | 22 | 24 | 27 | 20 | 397 |
| Pool rooms | 33 | 23 | 24 | 45 | 58 | 25 | 20 | 21 | 20 | 27 | 31 | 31 | 358 |
| Yards, sheds, areas, etc. | 440 | 444 | 642 | 655 | 802 | 974 | 1192 | 713 | 831 | 695 | 659 | 543 | 8590 |
| Vacant lots (nuisances) | 59 | 61 | 93 | 91 | 104 | 95 | 44 | 53 | 74 | 54 | 47 | 54 | 829 |
| Streets and lanes (nuisances) | 363 | 379 | 427 | 236 | 340 | 187 | 209 | 246 | 345 | 311 | 456 | 346 | 3845 |
| Infectious diseases (houses placarded, disinfected, etc.) | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| Gasoline filling stations | ---- | 18 | 16 | 2 | 7 | 7 | 8 | 23 | 15 | 9 | 23 | 27 | 155 |
| Garages | 3 | 13 | 11 | 8 | 7 | 10 | 15 | 19 | 12 | 5 | 33 | 16 | 152 |
| Undertakers' establishments | 1 | ---- | 1 | ---- | 7 | 1 | ---- | ---- | ---- | ---- | ---- | ---- | 10 |
| Bedding factories | ---- | 4 | 1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 5 |
| Lack of heat in dwellings | 13 | 7 | ---- | ---- | 3 | ---- | ---- | ---- | ---- | ---- | 7 | 9 | 39 |
| Wiping rags | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 1 | ---- | 1 |
| Refrigerators (chemical) | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 8 | ---- | 8 |
| Total number of inspections | 1688 | 1661 | 1970 | 1883 | 2215 | 2107 | 2086 | 1665 | 2054 | 1860 | 2030 | 2422 | 23641 |

## SANITARY INSPECTIONS FOR THE YEAR 1927—Continued

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Re-inspections | 1047 | 1060 | 1285 | 1596 | 1946 | 1768 | 1488 | 1585 | 1698 | 1549 | 1498 | 1127 | 17647 |
| Total number of inspections and re-inspections | 2735 | 2721 | 3255 | 3479 | 4161 | 3875 | 3574 | 3250 | 3752 | 3409 | 3528 | 3549 | 41288 |
| **DEFECTS AND NUISANCES DISCOVERED AND ABATED:** | | | | | | | | | | | | | |
| Drains, choked or defective | 20 | 20 | 26 | 18 | 32 | 27 | 11 | 16 | 16 | 15 | 19 | 23 | 243 |
| Sinks and wash-basins, choked or defective | 13 | 18 | 18 | 12 | 18 | 16 | 13 | 18 | 18 | 21 | 13 | 15 | 193 |
| Water closets and fittings, choked or defective | 24 | 35 | 38 | 40 | 42 | 31 | 27 | 21 | 38 | 35 | 37 | 27 | 395 |
| Baths and fittings, choked or defective | 1 | ---- | 3 | ---- | 3 | 4 | 1 | ---- | 2 | 2 | 4 | 2 | 22 |
| Urinals & fittings, choked or defective | 2 | 2 | 10 | 4 | 8 | 4 | 1 | 3 | 4 | 7 | 4 | 1 | 50 |
| Soil-pipes, clean-outs, etc., choked or defective | 11 | 16 | 13 | 8 | 14 | 13 | 10 | 8 | 5 | 10 | 12 | 10 | 130 |
| Catch-basins and traps, choked or defective | 13 | 13 | 13 | 23 | 18 | 20 | 11 | 22 | 20 | 13 | 14 | 13 | 193 |
| W. C. compartments, defective light and ventilation | ---- | ---- | ---- | 3 | 1 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 15 |
| Plumbing and water pipes, frozen | 52 | 30 | 28 | 8 | 1 | ---- | ---- | ---- | ---- | ---- | 13 | 35 | 167 |
| Vent stacks, frozen | 1 | 1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 12 | 14 |
| Sewer connections, frozen | ---- | ---- | ---- | 1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 1 |
| Water services, defective or cut off | 31 | 22 | 14 | 31 | 21 | 13 | 11 | 10 | 11 | 12 | 16 | 16 | 208 |
| Plumbing fixtures, insufficient | 1 | 2 | ---- | 1 | 2 | 3 | 3 | 1 | 3 | 1 | 2 | 1 | 20 |
| New plumbing, notice to install | 9 | 1 | 2 | 3 | 4 | 5 | 3 | 4 | 4 | 3 | 4 | 4 | 46 |
| Total plumbing defects | 178 | 160 | 165 | 152 | 164 | 140 | 93 | 104 | 122 | 120 | 139 | 160 | 1697 |

## SANITARY INSPECTIONS FOR THE YEAR 1927—Continued

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dirty yards, courts, sheds, etc. | 284 | 264 | 400 | 377 | 494 | 339 | 208 | 276 | 237 | 243 | 249 | 222 | 3593 |
| Poultry kept in dwelling | 1 | 1 | 5 | 2 | 3 | 4 | 3 | 5 | 4 | 3 | 3 | 6 | 40 |
| Pigeons kept in dwelling | .... | .... | .... | 1 | 2 | 1 | 1 | 3 | 3 | 1 | 3 | .... | 15 |
| Animals kept in dwelling | .... | 2 | 1 | .... | 1 | .... | .... | .... | 1 | .... | 1 | 2 | 8 |
| Poultry kept under insanitary conditions | 2 | 3 | 13 | 8 | 11 | 14 | 5 | 15 | 25 | 10 | 6 | 4 | 116 |
| Cows or other cattle kept under insanitary conditions | .... | .... | 4 | 2 | 5 | 5 | 2 | 1 | .... | .... | 16 | 6 | 41 |
| Cows or other cattle kept too close to dwelling | 1 | .... | 1 | .... | .... | 1 | .... | 5 | 2 | 4 | .... | 2 | 16 |
| Hogs, unlawfully keeping | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 |
| Horses, insanitary stables | .... | 2 | 4 | 7 | 11 | 8 | 7 | 4 | 5 | 6 | 6 | 2 | 62 |
| Garbage receptacles | 133 | 163 | 177 | 227 | 490 | 599 | 582 | 414 | 331 | 259 | 199 | 181 | 3755 |
| Refuse receptacles | 76 | 69 | 59 | 50 | 101 | 102 | 92 | 61 | 81 | 77 | 67 | 60 | 895 |
| Manure bins, defective | 38 | 48 | 51 | 37 | 59 | 67 | 42 | 46 | 64 | 61 | 54 | 37 | 604 |
| Ash receptacles | 39 | 55 | 8 | 5 | 6 | 4 | 4 | 3 | 4 | 16 | 21 | 56 | 221 |
| Paper receptacles | 29 | 24 | 17 | 19 | 15 | 19 | 23 | 21 | 10 | 14 | 9 | 8 | 208 |
| Cellars and basements, defective | 11 | 15 | 20 | 46 | 40 | 44 | 25 | 29 | 28 | 25 | 22 | 18 | 323 |
| Dwellings, dilapidated & insanitary | .... | 2 | 5 | 9 | 10 | 10 | 5 | 2 | 6 | 3 | 4 | 9 | 65 |
| Tenements, dilapidated & insanitary | .... | 2 | .... | .... | .... | .... | 1 | 1 | 5 | .... | 6 | 1 | 16 |
| Offices and workshops, dilapidated & insanitary | 1 | 5 | 4 | .... | 1 | 1 | 1 | .... | 1 | .... | .... | 1 | 15 |
| Dilapidated and insanitary other buildings | 2 | 3 | 3 | 5 | 2 | 4 | 2 | 3 | 3 | 3 | 3 | 10 | 43 |
| Overcrowdirg (day inspections) | 20 | 21 | 31 | 30 | 29 | 16 | 12 | 20 | 22 | 28 | 26 | 18 | 273 |
| Overcrowding (night inspections) | .... | .... | .... | 2 | 4 | .... | 1 | .... | .... | .... | 2 | .... | 9 |
| Overcrowding (notices) | 2 | 6 | 10 | 4 | 5 | 1 | 1 | .... | 6 | 5 | 3 | 3 | 46 |

## SANITARY INSPECTIONS FOR THE YEAR 1927—Continued

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rat-infested buildings | 3 | 1 | 5 | 4 | 5 | 2 | 12 | 1 | 4 | 5 | 5 | 6 | 53 |
| Cockroach infested buildings | 5 | 2 | 1 | 2 | 3 | 4 | 3 | 4 | 7 | 8 | 10 | 5 | 54 |
| Bed-bug infested buildings | 1 | 1 | 7 | 7 | 12 | 10 | 3 | 6 | 11 | 10 | 7 | 5 | 80 |
| Chimneys, defective | 5 | 3 | 3 | 2 | 3 | 4 | 1 | 6 | 4 | 10 | 7 | 7 | 55 |
| Roofs, defective | 2 | 4 | 11 | 12 | 15 | 15 | 8 | 19 | 16 | 18 | 9 | 3 | 132 |
| Eavestroughs and rain-water leaders, defective | 4 | 2 | 6 | 18 | 31 | 28 | 20 | 37 | 22 | 17 | 7 | 1 | 193 |
| Gas fittings and piping, defective | 2 | 6 | 2 | 3 | 1 | 1 | 2 | 1 | 3 | 3 | 3 | 1 | 28 |
| Furnaces and heating apparatus, defective | 9 | 3 | 2 | 1 | .... | .... | .... | 1 | 2 | 5 | 16 | 19 | 58 |
| Refrigerators, defective (chemical) | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | 1 |
| Lighting, defective | .... | 2 | .... | 1 | 4 | 3 | 3 | 3 | 2 | 3 | .... | 2 | 23 |
| Ventilation, defective | 3 | 3 | .... | 1 | 1 | 6 | 1 | 1 | 4 | 5 | 2 | 5 | 32 |
| Pit closets, concrete or brick, notices | 2 | 2 | 1 | 5 | 2 | 5 | 1 | 3 | 8 | 4 | 2 | 6 | 41 |
| Contractors' closets, notices | 17 | 17 | 35 | 63 | 67 | 110 | 112 | 127 | 123 | 83 | 60 | 46 | 860 |
| Chemical or patent closets | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | ..... |
| Stagnant water, vacant lots | .... | .... | 19 | 61 | 53 | 17 | .... | 1 | .... | 3 | 1 | .... | 155 |
| Other nuisances, vacant lots | 51 | 60 | 86 | 66 | 72 | 79 | 42 | 53 | 72 | 49 | 40 | 53 | 723 |
| Nuisances on lanes or streets | 356 | 375 | 399 | 236 | 350 | 200 | 240 | 251 | 335 | 309 | 450 | 351 | 3852 |
| Total number of defects | 1099 | 1167 | 1390 | 1313 | 1908 | 1723 | 1465 | 1423 | 1451 | 1290 | 1320 | 1156 | 16705 |
| Total plumbing defects | 178 | 160 | 165 | 152 | 164 | 140 | 93 | 104 | 122 | 120 | 139 | 160 | 1697 |
| Total defects discovered (including plumbing defects) | 1277 | 1327 | 1555 | 1465 | 2072 | 1863 | 1558 | 1527 | 1573 | 1410 | 1459 | 1316 | 18402 |

## SANITARY INSPECTIONS FOR THE YEAR 1927—Continued

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SMOKE NUISANCES** | | | | | | | | | | | | | |
| Chimneys and smoke stacks (observations) | 47 | 27 | 6 | 9 | 23 | 15 | 17 | 28 | 36 | 27 | 23 | 52 | 310 |
| Furnaces, boilers, fuels, etc., inspections of | 79 | 94 | 32 | 37 | 51 | 77 | 56 | 64 | 141 | 113 | 95 | 86 | 925 |
| Total | 126 | 121 | 38 | 46 | 74 | 92 | 73 | 92 | 177 | 140 | 118 | 138 | 1235 |
| Notices, statutory | .... | 1 | 3 | .... | .... | .... | .... | 2 | .... | 1 | .... | .... | 7 |
| Notices, verbal | 45 | 25 | 5 | 7 | 9 | 7 | 9 | 8 | 31 | 14 | 35 | 42 | 237 |
| Total | 45 | 26 | 8 | 7 | 9 | 7 | 9 | 10 | 31 | 15 | 35 | 42 | 244 |
| **MISCELLANEOUS** | | | | | | | | | | | | | |
| Milk samples taken | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | ..... |
| Water samples taken | 9 | 12 | 16 | 12 | 12 | 15 | 15 | 10 | 12 | 12 | 12 | 12 | 149 |
| Chemical tests (plumbing & drainage) | | | | | | | | | | | | | |
| Positive results | | | | | | | | | | | | | |
| Negative | | | | | | | | | | | | | |
| Cases reported for prosecution | .... | 6 | 4 | 1 | 4 | .... | 1 | .... | 1 | 1 | .... | .... | 18 |
| Time attending court (hours) | .... | 1 | ½ | 3 | 1½ | .... | .... | .... | .... | 3 | 1 | .... | 10 |

## Frozen Plumbing and Water Pipes

As long as we have so many old buildings, poorly constructed, with non-frost-proof cellars, and where plumbing and water pipes have been placed without any thought as to how they are to be prevented from freezing in Winter, we shall always have considerable trouble of this nature. Then again we have the problem of the lock-up stores, the proprietors of many of which would, if they were permitted, have their water supply cut off during the Winter in order to avoid the expense of maintaining constant heat. There were 182 such cases dealt with during the year. This number, however, by no means indicates the total number, but only those where complaint was made to the Department.

## Other Plumbing Defects

These numbered 1,697, or 63 fewer than last year, and included choked or defective drains, sinks, wash basins, water closets, baths, urinals, soil stacks, catch basins and clean-outs. We frequently find cases where plumbing fixtures have been installed without permits or in an unsatisfactory manner. In the case of one such sink installed without a trap and discharging below the cellar floor, the sewage flowed back into the weeping drains round the house and created a foul and offensive condition.

There were 66 notices served to install new or additional plumbing. There were 812 new dwelling houses, 10 new apartment blocks, and 10 smaller buildings with suites erected. Very few of these were built on streets without sewers or water mains. There are, in fact, only 292 dwellings in the City which are without plumbing.

## Defective Roofs, Eavestroughs and Rain Water Leaders

Complaints re defective roofs, 139; defective rain water leaders, 193. These are the most frequent cause of dampness in buildings. Nothing is more annoying to a tenant.

## Garbage, Manure and Other Receptacles

It needs considerable work on the part of our inspectors to keep the supply of these receptables up to the standard required; they break, wear out or are stolen, and many citizens object to renewing these most necessary conveniences. Notices were served as follows:

| | |
|---|---|
| Garbage cans | 3,755 |
| Refuse receptacles | 895 |
| Manure bins | 614 |
| Ash receptacles | 221 |
| Paper receptacles | 208 |
| Total | 5,693 |

Our special campaign for garbage cans during the Summer was very successful.

## Scavenging

Although the actual scavenging is done by another Division, our own inspectors are required to observe how it is done, to report places apparently missed, and more particularly to see that the various kinds of refuse are kept as is required by the regulations, in order to facilitate removal. There were no general complaints regarding the scavenging system, although the Board of Trade has recently asked the City to establish a semi-weekly removal of garbage during June, July and August. In the tenement district from Notre Dame Avenue to the Assiniboine River, where almost every house contains several families, we think that a semi-weekly service is desirable. In view also of the difficulty experienced by householders of disposing of lawn cuttings and garden refuse in Summer, thus leading to such substances being placed on lanes and vacant lots, a removal of this class of refuse once a week, at least, in Summer would be much appreciated.

We received 471 complaints regarding the non-removal of garbage, etc., or improper methods of storing the same.

The following requests were made of the Street Cleaning Division:

| | |
|---|---|
| To clean Contractors' closets | 377 |
| To remove garbage | 31 |
| To remove dead animals | 25 |
| To remove ashes | 49 |
| To clean brick pit closets | 23 |
| To remove infected bedding | 3 |
| To remove manure from streets or lanes | 7 |
| To remove tins or incombustible refuse | 62 |
| To clean up vacant lots | 16 |
| Total | 593 |

The best of co-operation has existed between the two Divisions.

## Contractors' Closets

Permits issued, 731, as against 558 in 1926. Inspections and notices, 860, or 179 more than last year. A more frequent cleaning of these closets is desirable, especially in the hot weather. Such conveniences are a necessary evil in order to prevent indiscriminate disposal of body wastes which may become a source of infection. They should be well constructed, fly-proof, and the receptacles water-tight. It is hard to get some contractors to realize this; any old contraption is considered good enough for the purpose.

## Feed and Sale Stables

Fifteen permits were issued and two refused. Total inspections, 403.

## Keeping of Animals

Inspections of private stables, 1,644. There are about 200 cows kept for private use in the City. The following cases were dealt with:

| | |
|---|---|
| Cows kept in insanitary stables, sheds, etc. .... | 27 |
| Calves kept in insanitary stables or sheds ..... | 3 |
| Horses kept in insanitary stables or sheds ..... | 101 |
| Goats kept in insanitary stables or sheds ..... | 1 |
| Pigs kept in insanitary stables or sheds ..... | 10* |
| Total..... | 142 |

*The pigs were brought into the City and put into the yard of a private dwelling. Removed next day.

These animals were kept in 49 stables or sheds, except in three cases where no stable was provided.

**Action Taken and Results:**

| | |
|---|---|
| Stables and sheds vacated and placarded ..... | 3 |
| Stables and sheds vacated, not placarded ..... | 5 |
| Stables and sheds improved ..... | 13 |
| Number of animals reduced in ..... | 3 |
| Stables demolished ..... | 3 |
| Cows kept on vacant lots removed ..... | 3 |
| Time extended until Spring ..... | 22 |
| Total..... | 52 |

**Animals Removed:**

| | |
|---|---|
| Horses ..... | 27 |
| Cows ..... | 8 |
| Calves ..... | 2 |
| Pigs ..... | 10 |
| Total..... | 47 |

**Poultry:**

| | |
|---|---|
| Poultry kept in dwellings ..... | 40 |
| Poultry kept in insanitary sheds, pens, etc. .... | 116 |
| Pigeons kept in dwellings ..... | 15 |
| Total..... | 171 |

| | |
|---|---|
| Complaints of other animals kept in dwellings (mostly dogs and cats) ..... | 8 |

## Licensed Dog Kennels

Permits issued, 34, or 10 more than last year. Inspections made, 195. Several complaints were made of nuisance due to the barking of dogs kept in kennels.

## Nuisances in Yards, Sheds, Lanes, Vacant Lots, etc.

| | |
|---|---|
| Dirty yards, courts, sheds, etc. | 3,593 |
| Stagnant water on vacant lots | 155 |
| Other nuisances on vacant lots | 723 |
| Nuisances on streets and lanes | 3,852 |
| Total | 8,323 |

This is 183 more than last year. Complaints of stagnant water increased 109 owing to the wet Spring. It is surprising how many people consider it quite all right to dispose of refuse by depositing it on the property of other citizens, or on lanes. Eleven persons were prosecuted and fined for so doing.

## Nuisances Abated Compulsorily and Charged as Taxes

None this year.

## Compulsory Sewer Notices

None this year.

## Applications for City Installed Plumbing

One or two received, but none accepted.

## Overcrowding

Day inspections made, 273. Night inspections, 9. Forty-six notices were served to abate overcrowding. A fairly large immigration in the Spring and early Summer caused a little increase of overcrowding in some of the boarding-houses which cater to these men. Some were found accommodated in cellars. A more frequent inspection, and the placing of cards in each room, indicating the number of occupants allowed therein, soon checked this tendency.

Owing to the deaths of a number of men from drinking Methyl Alcohol in one of the lodging-houses, it has again been suggested that a better control of conditions in lodging-houses could be had if such places were registered or licensed. A by-law to do this has been prepared for the consideration of the Health Committee.

## Housing

There were 812 new houses built during the year; also 10 residential apartment blocks, and 10 smaller mixed blocks. Total new suites, 337. The new houses and suites will provide accommodation for 1,110 families. Fifty-nine dwellings were, however, demolished. The new construction was all done by private enterprise.

At December 31st our Vacant House Survey showed 571 vacant houses or 1.7% of all houses in the City (32,423), and 392 vacant suites, or 4.5% of all suites (8,625).

The increase of population during the year is estimated at about 3,000, so that the new construction will scarcely do more than provide for this increase of population. The new dwelling houses appear to be all constructed for use by the owners, or for sale.

We see little, if any, change in the condition of the large number of one-family dwellings now occupied unlawfully as tenements. Many of the families living in such houses could and would move out and rent small dwellings, where they could bring up their children under better conditions than are found in these overcrowded tenements, were such houses to be found. Nobody, however, appears to be inclined to build houses for rent.

On the other hand, a large number of the families living in such houses are in poor circumstances; they have no furniture of their own, and many of them find it hard to pay the rents demanded. In order to avoid the expense of furnishing, and also of heating a house, should they procure one, they are practically compelled to live in tenements where they do not have to worry about either, (except that the heat provided is often scarcely enough to keep them comfortable). One would hesitate to advise the City to embark on the proposition of building small houses for rent. Such a scheme could no doubt be made to pay, but great care would have to be exercised as to the kind of tenants to whom the houses were rented. There is a class of tenants who go from house to house and never pay rent. But after all, this class is not numerous, and there must be a large number of families living in rooms today who would be glad of the opportunity of renting small houses, and who would be good paying tenants.

As soon as small houses for rent were available there would doubtless be a considerable thinning out of the number of families living in the class of houses under consideration. This would make more room for those left and probably bring down rents. Doubtless this would in turn result in many of the rooming-house keepers going out of business and perhaps many of the houses would become vacant. As a final result it is extremely probable that numbers of such houses would be altered or remodelled by the owners thereof and made more suitable for use by families. Anything which will help us to get away from the one-room home (?) now so common, should be welcomed. I still believe that this desirable end might be hastened by a little judicious pressure exerted in

the form of a by-law regulating the use of such houses, and requiring even now, more room for each family, adequate sanitary conveniences, the regulation of the use of gas stoves and other improvements suggested in previous reports.

The new Building By-law was finally passed in August and all former Building By-laws repealed. We prepared for the Health Committee a review of the features of the new by-law which affect health, referring more particularly to the open spaces required round dwellings, lighting, ventilation and plumbing. It was pointed out that the first Tenement House By-law had been passed at the instigation of the Health Department and that this by-law had subsequently been made a part of the Building By-law in force until August last. Also that the new by-law is apparently a Building Code only, and deals mostly with conditions of safety, whereas the old by-law contained a good many provisions affecting health, including some regarding the maintenance of dwellings and apartment blocks after construction. These provisions had been inserted at the instance of the Health Department, and had been found very useful in securing sanitary conditions in new buildings. Some of these provisions have been omitted from the new building code, notably the provisions regarding plumbing. Whilst these might have been taken out and re-enacted in the Health by-law or a special Housing By-law, this was not done, and as a consequence there is now no City by-law properly regulating these matters. The effect is that the previous high standard in such matters has been lowered, and advantage will doubtless be taken of these omissions by some desirous of constructing cheaper apartment blocks. In some features of the new by-law—notably as regards the natural light required in apartment blocks—it appears to us that the new by-law is inferior to the old by-law. It would take too much space to enumerate these here. We trust, however, that some further consideration may be given these matters, always remembering that the most important factor in securing healthful conditions in a dwelling is to ensure that it shall be properly constructed in the first place. For this reason, and because mistakes in building can seldom be afterwards rectified, a Building By-law is of great importance to a Health Department. In old buildings we are constantly faced with the effects of bad construction in years gone by. In a new building it is possible to avoid repeating such conditions.

In some respects—notably the requirements of better insulation in dwellings, in order to secure warmth in Winter and coolness in Summer—the new by-law is admirable.

## Zoning

We have had several complaints during the year of coal yards, pickle factories or other businesses established in residential areas. Public opinion, however, has now been so aroused by the frequency of complaints of this nature, that the appointment of a City Planning Commission cannot long be delayed.

The vast improvement made by the Memorial Boulevard and Osborne Street extension has given the citizens a practical object lesson of what might be accomplished by a permanent Town Planning Commission when it gets to work. Relief for the ever increasing traffic, the creation of new vistas of beauty, and the providing of more open spaces, will give an added pride in our City. Of the functions of such a Commission, however, zoning seems to be the most pressing. By means of the proper districting of the City, property values will be conserved, and many other considerations of great value to the health of the community will ensue.

## Gas Stoves and Fittings

The Department dealt with 28 cases of defective gas stoves and fittings during the year. Last year with only 11. We commented very fully on the dangers to gas users in last year's report, so will not repeat. We still believe, however, that all gas fitting and gas fixtures should be regulated by by-law. Plumbing is thus regulated, and the risks to health from defective gas fittings are greater than those from defective plumbing.

## Chemical and Mechanical Refrigerators

These have long been in use in commercial plants such as abattoirs, cold storage plants, creameries, etc. Within the last few years, however, household refrigerators, operated mechanically and using various gases as refrigerants, have come into use. Of the refrigerating agents used in these household refrigerators, Sulphur Dioxide, Carbon Dioxide, and Methyl Chloride are the most common. Ammonia, Ethyl Chloride and Isobutane are also used. Some of these gases are poisonous. Some of them, however, such as Ammonia, and Sulphur Dioxide are so extremely irritating to the eyes, nose and throat that even a very slight leak very quickly gives warning of its presence, so that although these gases are dangerous to the health of the occupants even in small quantities, it is not probable that any escape of gas will be permitted to continue for long before repairs are made. Methyl Chloride, however, which is new to Winnipeg, has only a faint ethereal odour, less strong than might be the odours of articles of food kept in refrigerators. Most of the domestic refrigerators installed are self-contained, that is to say, in each refrigerator is enclosed the cylinder and pipes containing the refrigerant used. The quantity of refrigerant used in each is not large. In the case of a few apartment blocks, however, the refrigerators in the individual suites are supplied by compression tanks and machinery located in the basement, the refrigerant being supplied by small pipes placed inside the interior walls. It is evident, that in such cases the possibility of gas escaping is much greater; firstly, because of the possibility of unnoticed leaks in the ramifications of the distributing pipes; and also because the volume of gas in the system is much greater than in the self-contained machines.

We recently had occasion to inspect apartment blocks where Methyl Chloride systems had been installed. In one of these, leaks occurred in the piping with cases of sickness which were said to be due to inhalation of this gas. The leaks were discovered and repaired, and as a measure of safety, a small quantity of Sulphur Dioxide was used in addition to the Methyl Chloride with the object of detecting by smell any subsequent leakage. Those responsible for the installation claim that the cases of sickness mentioned were due to some other cause than Methyl Chloride. It is evident, however, that further investigation will be necessary with the object of fully safeguarding the use of this and other refrigerants, especially in dwellings. As Messrs. Henderson and Haggard remark in a recent work on Noxious Gases and the Principles of Respiration Influencing Their Action—"Many laws exist to protect the public in the matter of food supplies, but there is as yet little or no legislation regulating the use of the many and various chemical compounds which are being introduced for use both in households and in industry, as for instance, some of the quick drying varnishes, lacquers, and paints. Doubtless a more perfect understanding of the hazards involved in the use of such substances will result in the enactment of appropriate legislation on the subject."

## Prevention of Cross-connections in Water Supplies

Two instances were investigated during the year. A Cemetery had a storage tank for supplying water for gardening purposes, with about 40 standpipes at points throughout the grounds. This tank was supplied with water from the Red River, and there was nothing to prevent visitors to the Cemetery, or workmen therein, from drinking this polluted water. At another point in the grounds a direct cross-connection of the Red River water system to the City's domestic supply system was found. On pointing out this to the Company owning the cemetery they at once disconnected the two systems, in fact they discontinued the use of the river water entirely. The tank and pipes were then chlorinated and all danger satisfactorily eliminated.

The other instance was where a railway company, in addition to the use of a City water supply, maintains a pumping station of its own situated on the bank of the Red River, and from which river water is pumped in case of fire. This river water was stored in gravity tanks in the yards. It was desired to connect these two tanks with the domestic mains, also, and this was done under our supervision in such a manner as to prevent any possibility of a cross-connection in the tanks. The plumbing fixtures in the various shops are now supplied with City water only, but from the tanks. It was pointed out to the Company that in case of fire Red River water may be supplied to these plumbing fixtures, and that inasmuch as under ordinary conditions it will be quite safe for employees to take drinking water from any of these fixtures, they may, if not prevented form the habit of so doing. In the case of fire there would, however, be river water in the system, and persons not

knowing this might drink such water. There being no possibility of the City water mains being contaminated, we have no power to prevent the use of the auxiliary Red River system. We have, however, suggested to the Company that notices should be kept posted in all the shops prohibiting employees from drinking at any of the fixtures connected with the fire system, and that only the drinking fountains which have separate connections with the domestic mains should be used for this purpose. Needless to say that we should have preferred the entire discontinuance of the auxiliary river water supply.

## Workshops, Manufactories and Office Buildings

Inspections of workshops and manufactories, 468; office buildings, 74.

Some of the places coming under our notice by complaint or otherwise were as follows: Overcrowding in a garment factory, with alleged prevalence of tuberculosis amongst the workers; careless handling of materials and lack of suitable precautions in a battery making works with danger to the health of the workers from lead poisoning; vibration from a mill erected close to dwellings; odours from a pickle and vinegar factory; dust from the unloading of coal in coal yards in residence districts; lack of proper ventilation and defective dust-removing apparatus in a wood-working factory; odours from a plant for evaporating buttermilk and manufacturing a stock food.

Some further investigation was and is being made of the conditions regarding lighting and ventilation in garages and auto repair works, with special reference to the amount of carbon monoxide present in the atmosphere in such places. A few places were found where attention has been paid to this danger. Ample mechanical ventilation is provided and maintained. Two or three owners have provided a system by which the exhaust gases of automobiles, being operated whilst under repair, are connected by means of flexible pipes with the ventilation system and all gases thus removed as generated. The majority, however, have not in our opinion, got a satisfactory system of ventilation. In Winter especially is this the case. Many of the men employed complain of headaches. It would be well if this Department or the City Chemist were supplied with a suitable apparatus for estimating the quantity of C.O. present in the air of garages. A test of the air itself or blood tests of the employees, possibly both, is indicated if actual conditions as to Carbon Monoxide in garages are to be ascertained. The Building By-law should contain specifications for adequate windows and vent ducts in public garages and auto repair shops, and it may be that the Health By-law will also require some amendment before satisfactory conditions will be obtained.

We examined and approved, after necessary alterations had been made, the occupation of several basements for the operation of pool rooms and bowling alleys, as required by the regulations of the Provincial Board of Health. Some applications were refused.

Other complaints related to poor lighting or ventilation, and also to inadequate, defective, or uncleanly plumbing fixtures.

## Rats

Complaints regarding rat-infested buildings numbered 53, or 11 more than last year. A bounty of five cents for every rat's tail delivered at this office was paid. Tails delivered, 4,871, and the cost was $243.55. This is an increase of 1,419 over 1926. No fewer than 1,471 of these tails came from the Saskatchewan Avenue Nuisance Ground. Some others were, 386 from one grain warehouse, 268 from one stable, 270 from an abattoir, etc., in fact 3,695 came from 13 premises, and only 1,176 from all the other buildings in the City.

There were 1,107 boxes of rat poison distributed gratis, of which Ward I received 18.4%, Ward II, 26.8%, and Ward III, 54.7%.

We could wish that the general public was more alive to the desirability of getting rid of rats. In his Gordon Bell Memorial Lecture on "Food Poisoning," delivered in Winnipeg last April, Prof. E. O. Jordan, Ph.D., of Chicago, one of the most eminent of Bacteriologists and Sanitarians, drew attention to the danger of eating food contaminated by animal carriers of paratyphoid bacilli. He pointed out that rats are liable to individual infection and also to extensive epidemics, and that among these animals in a state of nature, carriers of disease are frequently found. Dr. Jordan condemned the use of viruses for destroying rats, as liable to lead to food contamination, and further said: "The protection of food, cooked or uncooked, from occasional contamination with vermin is not an easy matter either for City or Country dwellers. It is, however, a question that will undoubtedly receive more attention in the near future from health authorities, particularly as regards conditions in restaurants, hotels, and public institutions. The use of bacterial viruses should be prohibited."

## Public Baths and Comfort Stations

Inspection of baths, 71; of comfort stations, 245. Samples of water taken from the swimming pools and submitted to the City Bacteriologist for examination, 120. We also took a number of samples from the Y.M.C.A. pool. Both the baths and comfort stations were kept in a clean and sanitary condition during the year.

## Private Hospitals

Permits issued, 4. Inspections, 10.

## Undertakers' Establishments

Permits issued, 7. Inspections, 10. Reports showed conditions satisfactory.

## Common Drinking Cups and Towels

The use of these is forbidden by the Regulations of the Provincial Board of Health; 79 warnings were issued, or 38 more than in 1926.

## Chimneys and Furnaces

Defective chimneys dealt with, 55. Defective furnaces or heating apparatus, 58. The complaints were of lack of heat, and also of smoke and gases permeating buildings. In one case a woman alone in the house had been overcome by gases from the furnace. It appeared that a chimney sweep had been to the house the same morning. The chimney should therefore have been clear. An inspection showed that the soot box at the bottom of the chimney was empty, but there proved to be a large quantity of soot lodged in the chimney and this had caused a partial obstruction, with the consequence of generating from the coke fire a quantity of Carbon Monoxide gas which had gained access to the rooms of the house and the result to the only occupant might have been fatal. We recommended to the License Department that chimney sweeps should be instructed to take all necessary precautions to see that chimneys are quite clear before leaving the job; that chimneys should be cleaned from the base up and not by dropping a weighted brush from the top, and a mirror inserted after cleaning to examine the flue; or if this is not possible, the cleaning brush should be seen by the sweep at the base of the flue before it is withdrawn. The length of the smoke pipe next nearest to the chimney should also be taken out and examined, as soot from the sweeping may get into the pipe here and obstruct it. The smoke pipe should not unduly protrude into the chimney.

## Billiard Rooms

Permits issued, 69. Inspections made, 358. All pool rooms were inspected and put into good condition before the licenses were renewed on June 1st.

## Second-Hand Dealers and Junk Yards

Permits issued, 142, or 9 fewer than in 1926. Inspection made, 397.

## Wiping Rags

A few complaints were received, but no serious infractions of the regulations were discovered. In one or two cases inspected, rags were improperly marked. This was rectified at once.

## Bedding Factories

As forecast in our last report, the Provincial Board of Health promulgated regulations dealing with such establishments. The contents of these regulations are set forth in the report of the Medical Health Officer under the heading of Legislation Enacted.

On account of the practical difficulties in the way, no attempt was made to license the manufacturers, to require the labelling of all products, to regulate the importation of bedding or upholstered furniture, or to forbid the sale of second-hand bedding.

On the other hand, however, we have now regulations which will prevent the use of dirty or contaminated materials in either articles of bedding, or for upholstering, or the sale of any such materials. Any second-hand material used will have to be properly sterilized, and is to be sold only in sealed packages properly marked. The bedding manufacturers of Winnipeg now in business are fully in accord with the new regulations. A high standard is maintained in their plants and the regulations we believe, even though they do not go so far as the manufacturers could wish, will prevent the use of undesirable materials in future by any who might be inclined to do so. They provide an added protection to the public. Anything more repulsive than the use of filthy materials concealed under new and gay covers can scarcely be imagined.

## Barber Shops

One hundred and thirty-three inspections were made of such premises.

## Vermin

Fifty-four complaints were received of buildings infested with cockroaches, and 80 regarding bed-bugs. There still being no specific by-law on the matter, we have to deal with such cases on the general ground of a want of cleanliness in the premises. The section formerly found in the old Building By-law prohibiting, in tenement buildings, the renewal of any wall paper until all old wall paper had been first removed and walls cleaned, was repealed, and is not found in the new by-law. This section was of service to the Department in dealing with vermin. Cases are frequently found where there are many layers of dirty wall paper on walls and ceilings. As many as 18 layers have been found. Such conditions provide a very fine harborage for bed-bugs.

## Theatres and Places of Amusement

Seventy-four inspections were made. The ventilation provided in most theatres is fairly satisfactory.

## Schools and Public Buildings

Twenty-five inspections of such buildings were made. The public schools are not inspected by us, except on complaint.

## Laundries

There were 117 permits issued for hand laundries, or 3 less than last year; and 686 inspections were made. These laundries are all gone over in April and May of each year and thoroughly cleansed and repaired before license is renewed. Three applications were made for permission to establish new laundries, but as the applicants failed to obtain the necessary signatures giving the consent of adjacent property owners, no additional permits were granted. There are 7 large steam laundries in the City, employing some 332 persons. These are not licensed as the

proprietors pay a business tax. These laundries were all inspected during the year, 47 inspections in all being made. It may be said that improved methods are constantly introduced into the laundry business as conducted in Winnipeg. Improved machinery, higher temperatures, and water softening plants, often quite expensive, all tend towards more effective work from a sanitary point of view, as well as increasing the life of the fabrics dealt with.

## Hotels

Fifty-nine permits were issued. It has been somewhat difficult, in some of the older hotels, to get all the work done which we considered necessary in order to maintain a good standard. Now that beer licenses are about to be issued the business should become more profitable and the lessees will be in a better position to make the requisite improvements.

## Insanitary Buildings

The table given below shows the number and class of premises for which notices were served upon the owners and occupiers, under Section 103 of the Public Health Act, under which section the Health Officer has power to require that premises be put in to a proper sanitary condition or else closed up.

| | |
|---|---|
| Dwelling houses, general insanitary condition.. | 27 |
| Dwelling houses, unlawful conversion of same to tenements ..... | .... |
| Tenement houses ..... | 1 |
| Basement and cellar dwellings ..... | 2 |
| Dark rooms (dwellings) ..... | 1 |
| Stores occupied as dwellings ..... | 2 |
| Factories and workshops ..... | 4 |
| Stables ..... | 4 |
| | 41 |

| | |
|---|---|
| Notices served on owners and agents ..... | 37 |
| Notices served on occupants ..... | 36 |

Results:

| | |
|---|---|
| Notices complied with, (premises put into sanitary condition) ..... | 21 |
| Premises closed and placarded ..... | 15 |
| Cases still pending ..... | 5 |
| | 41 |

| | |
|---|---|
| Remaining closed on December 31st, 1926 ..... | 181 |
| Premises repaired or demolished during 1927.... | 20 |
| | 161 |
| Premises closed during 1927, (dwellings, 10; stables, 3; other premises, 2) ..... | 15 |
| Remaining closed on December 31st, 1927 ..... | 176 |

## Work Done for Other Divisions or Departments

A good many inspections and reports were made for the Social Welfare Commission. We also co-operated with the Building Department in some instances, and made a few investigations for the Statistician regarding births.

## Prosecutions for 1927

| Nature of Charges | Cases |
|---|---|
| Nuisance on premises ..... | 1 |
| Deposit refuse or manure ..... | 11 |
| Neglect to comply with notice of Health Officer | 3 |
| Contractors' closets, lack of, defective, etc. .... | 1 |
| Neglect to provide metallic receptacles for garbage ..... | 2 |
| Occupied house placarded insanitary without permission of Health Officer ..... | 1 |
| Food prosecutions ..... | 5 |
| Dairy prosecutions ..... | 2 |
| Total..... | 26 |

## How disposed of

| Fine | Cases | Fines |
|---|---|---|
| Convicted and reprimanded .... | 4 | ..... |
| Withdrawn ..... | 1 | ..... |
| $ 3.00 ..... | 5 | .....$ 15.00 |
| 4.00 ..... | 2 | ..... 8.00 |
| 5.00 ..... | 6 | ..... 30.00 |
| 8.00 ..... | 1 | ..... 8.00 |
| 10.00 ..... | 2 | ..... 20.00 |
| 11.00 ..... | 1 | ..... 11.00 |
| 12.50 ..... | 1 | ..... 12.50 |
| 13.00 ..... | 3 | ..... 39.00 |
| Total..... | 26 | ..... $143.50 |

This is 5 less than in 1926. Prosecutions have been reduced to a minimum, in fact too much time is lost by inspectors in trying to get persons to comply with notices without resorting to prosecution. A little sharper action would not be amiss.

## General

There are now only 10 district inspectors. As the population of the City is now about 202,000, this gives an average of 20,200 persons for each district. All of the inspectors, and also the clerical staff of this Division have shown a keen interest in their work.

Yours obediently,

ERNEST W. J. HAGUE,

Chief Health Inspector.

# Report of Tenement Inspector

A. J. Douglas, Esq., M.D.,
Medical Health Officer.

Dear Sir:

I have pleasure in submitting, for your consideration, the following report on tenement inspection and action taken during the year 1927 in housing conditions.

We received 112 complaints of nuisances in tenements and apartment blocks. Last year there were 104 and the year previous, 77. Forty-nine of the complaints related to improper care and storage of garbage, defective garbage chutes, dilapidated garbage cans, etc. Complaints of bedbugs, cockroaches, etc., numbered 23. Other complaints related to defective plumbing and drainage, lack of heat, overcrowding, dirty halls, the shaking of rugs and mops on balconies, dampness, etc. As we have nearly 600 apartment blocks in the City, the number of complaints cannot be said to be excessive. Many of the complaints are trivial in character, and it not infrequently happens that conditions are remedied prior to our visit. On the other hand, we find a number of the complaints quite justified.

Early in the year we received a complaint of overcrowding in an old tenement house in the centre of the City. We found on inspection that a family, consisting of a woman and three young children, were living in an attic room which had a low sloping ceiling; natural light from a dormer window was 1/19th (half the amount required). A gas cooker was installed in a clothes closet.

Last year we inspected a two storey, 8 roomed frame dwelling and found four families in occupation. Even the cellar was occupied for living purposes and the catch basin used for the disposal of night soil. The cellar was vacated and the premises cleaned. We had occasion to re-inspect this year and found that a hole had been cut in the wall between the kitchen and a room adjoining. The kitchen sink had been removed from its original position and placed half in one room and half in the other with an additional water service, so that the fixture could be used by two families. We had this corrected with several other defects found at the time of inspection.

Constant inspection and re-inspection is necessary in order to maintain proper sanitary conditions in the older tenements. We are constantly coming across attic rooms occupied by families, where adequate natural light and ventilation cannot be had; where plumbing fixtures are improperly installed; where water pipes are led to various rooms without any plumbing fixtures; etc.

Several years ago we had the number of families reduced in one of our old tenements and this year again we had to deal with the same premises. On this occasion we found an unvented gas stove located in a clothes closet. The stove was in use at time of inspection and, owing to imperfect combustion, there was considerable odor; we had the stove and fittings removed.

Towards the end of the year, a report of alleged insanitary conditions caused us to inspect one of our old tenement and lodging houses. The building, which is probably about 50 years old, was found to be in a bad state of repair. Repairs and re-decorating is usually undertaken during the Spring in these and similar premises. There were 34 rooms with 64 beds; 16 of the rooms were rented by the month, 6 by the week, and 12 by the night. Many of the rooms are rented by a class of men who cannot afford to pay much rent and a large number are transients. Some of the beds, springs and mattresses were so dilapidated as to demand renewal. The floors being old and much worn were uneven and the oilcloth covering in bad repair in places; the task of keeping the floors clean was therefore very difficult. Notice was served on the owners to put defective waterclosets in good condition and repair all broken plaster, and this work was done. We also served notice on the lessee to remove all torn and dilapidated floor coverings and either replace with well-fitting, properly laid floor covering or the floors scrubbed and painted; also to remove all dilapidated, dirty and worn-out springs, mattresses, pillows and bed coverings, and replace with new. This was in hand at the end of the year.

We had considerable work done in a number of old tenements, including additional plumbing fixtures, cleaning and decorating of rooms, halls and corridors, etc. As usual we had to take action with regard to occupation of attics by families, dark rooms, etc.

We served a number of closing notices during the year where stores were being unlawfully occupied as dwellings. We have always taken the stand that premises being built and fitted up for stores should only be occupied as such and not as dwellings. It is seldom possible to make such alterations as are necessary to properly fit up stores for living purposes. We came across a store where a dressmaker had partitioned off a portion of a cellar where she and a young woman assisting her lived and slept. We pointed out the menace to health and how undesirable it was to occupy such dark and unventilated rooms, and the occupation ceased forthwith. In another instance, we found a mezzanine floor erected in the rear of a food store and occupied as a bedroom by the storekeeper and his wife. A flimsy wood partition with a window opening served to separate the store from the bedroom. In this case, however, there being sufficient space, and the store being on a corner, a bedroom was formed with a double sash window placed in a side wall, in addition to an existing window opening on the yard. We had the mezzanine floor removed and the living rooms shut off from the store.

With regard to the apartment blocks, there appears to be less demand for large suites, say of 5 or 6 rooms. There seems to be no difficulty, however, in getting tenants for the small suites. As a result, considerable alterations have been made in several apartment blocks where the suites were large, by having the latter divided into suites of a less number of rooms.

As stated in previous reports, there are still too many families housed in the so-called rooming houses. Notwithstanding the large number of dwellings built during the past few years, there is still a serious shortage of single-family dwellings. For this reason we are not putting much pressure on the illegal tenements, except in flagrant instances of overcrowding and unsuitable attic occupation. Few attic rooms are suitable for family use, on account of low sloping ceilings, insufficient natural light and ventilation. In addition there is a very real danger in case of fire.

Respectfully submitted,

ALEX. OFFICER,

Tenement and Supervising Inspector.

# Report of Smoke Inspector

A. J. Douglas, Esq., M.D.,
Medical Health Officer.

Sir:

I respectfully submit herewith report on smoke nuisances and their abatement for the year 1927.

**SMOKE INSPECTIONS**

| | January | February | March | April | May | June | July | August | September | October | November | December | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Observations:— | | | | | | | | | | | | | |
| Chimneys & smoke stacks | 47 | 27 | 6 | 9 | 23 | 15 | 17 | 28 | 36 | 27 | 23 | 52 | 310 |
| Inspections of furnaces, boilers, fuel, etc. | 74 | 94 | 32 | 37 | 51 | 77 | 56 | 64 | 141 | 113 | 95 | 86 | 925 |
| Totals | 126 | 121 | 38 | 46 | 74 | 92 | 73 | 92 | 177 | 140 | 118 | 138 | 1235 |
| Notices:— | | | | | | | | | | | | | |
| Statutory | ..... | 1 | 3 | ..... | ..... | ..... | ..... | 2 | ..... | 1 | ..... | ..... | 7 |
| Verbal | 45 | 25 | 5 | 7 | 9 | 7 | 9 | 8 | 31 | 14 | 35 | 42 | 237 |
| Totals | 45 | 26 | 8 | 7 | 9 | 7 | 9 | 10 | 31 | 15 | 35 | 42 | 244 |

I am pleased to record that the educative policy of smoke prevention has, in my opinion, had more beneficial results during last year than for for some years past.

The necessity for economy, which requires investigation in the prevention of waste, both in industrial plants and elsewhere, by those finansome years past.

A number of business premises have been connected with the Hydro Central Heating System. Some of these are comparatively low buildings and previously gave us considerable trouble, not only due to the objectionable smoke density, but owing to the relatively low chimneys in comparison with the buildings adjoining.

Very often, satisfactory elimination of smoke from these buildings in order to prevent gaseous products of combustion gaining access through the windows of premises adjoining, presents a problem which at times is not easy to overcome.

The extension of a chimney of a two-storey building above the parapet of a four-storey building would be, in my opinion, unreasonable. Offsetting of the chimney to a greater distance from the higher build-

ing and the use of a low volatile coal would be effective; the interference in draft conditions must be noted, however, More often, a change to a low volatile coal and frequent firing is resorted to.

Rather than carry out any change of chimney construction, the persons interested generally connect to the Central Heating system where same is available, thus relieving us of constant supervision and also results generally in more satisfactory economic conditions.

In my opinion, when new construction is in progress, note should be made of the chimney height of buildings adjoining, so that amicable terms may be made with the owners and such steps taken to utilize the chimney of the new and higher building or arrangements made to build in a separate flue.

A considerable number of Apartment Blocks and Business premises have installed special grates and settings known as the Carbo-Combustion and Turbine. Both are forced draft furnaces. They have proved themselves very economical.

The former gives excellent results with a low volatile coal especially, and the latter proves more satisfactory, both from boiler efficiency and smoke emission, with lignite coal.

There are three other industrial steam plants which are to be remodelled in the early Spring and will be provided with mechanical stoker equipment.

The latter plants were installed twenty years ago when economic conditions of boiler room equipment were not so well recognized as they are today, and are, of course, hand-fired boilers.

Persuasion to carry out boiler efficiency tests resulted in a showing of from 50 to 53 per cent. efficiency only.

There are now two steam plants using pulverized fuel.

One of these, unfortunately, has a comparatively low chimney in order not to interfere with the architectural effect of the building. Objectionable smoke emission for varying periods has been in evidence, but have now been improved by change in air supply volume and alterations to the pulverizer.

The ash emitted from the chimney, however, is proving to be of considerable nuisance to the residents in the vicinity, especially those residing in the direction of the prevailing wind. This deposit is more noticeable at a point about three to four hundred yards from the stack.

Floating particles in the air affect the eyes and any attempt to provide ventilation by means of the windows of dwellings, results in a considerable deposit of dust on furniture, etc.

At present, coal containing about fifteen per cent. ash is being used. The use of a lower ash coal is under consideration and the installation of an ash collector is expected. Our regulations, fortunately cover such a contingency.

It is worthy of note that the firm is co-operating, and although apparently slow, effective means to remedy the conditions are assured in the near future.

Heating plants with hand-fired boilers which require the greatest supervision are those which use Bituminous coal, containing the heavier hydro-carbons and where firing is infrequent.

Such coals have good coking qualities. The boiler settings are generally, however, too low, and moreover, due to the caretaker having other work to attend to, there is a low furnace temperature at time of firing. The result is a nuisance in the neighbourhood due to undue smoke emission and resultant economic loss to the owner.

A considerable number use a mixture of Bituminous and Semi-Bituminous coals, the latter having a low volatile content.

It will be obvious that there cannot be an even mixing. This results in a larger proportion of Bituminous coal being fired at one time than another. This accounts for the fact that observation of a chimney for one firing may be made and satisfactory results shown, yet the next firing may show dense smoke.

One must understand that the boiler in some blocks is only fired once every three or four hours so that periodic observations are necessary.

Another point is our varying temperature throughout the Winter months.

During the day, the temperature often rises considerably so that low furnace temperatures prevail.

Neglect to gradually build up the fire during the afternoon in preparation for the lower temperature later, results in forcing the fire and consequent emission of dense smoke.

There are instances where dealers persuade persons to change from an otherwise satisfactory coal, from both the smoke viewpoint and efficiency conditions, claiming they are substituting a better, cheaper and "smokeless" fuel.

A noteworthy case in this respect occurred a few weeks ago, when the engineer agreed on the suggestion of the mine representative, (the local dealer being present), to try a coal new to this locality.

A visit was paid to the boiler room on the second firing, as incidentally I was in the vicinity and observed the emission of dense black smoke.

The mine representative later informed the engineer that the authorities in Winnipeg were too particular, as where he came from one could walk along the streets wearing a white collar and return home with it quite black.

Although continuous supervision is necessary to reduce the smoke to a minimum, we have not yet reached the point of perfection.

Some of the reasons are explained in my previous remarks and may be augmented by other conditions, viz.:

Formation of clinker due to low temperature ash fusion and prevention of adequate air supply to the fuel bed.

Inadequate air spacing in grate bars.

Inadequate draft.

Low boiler setting.

Injudicious use of the slice bar and lifting the ash into the hot zone, causing clinker.

Overloading of boilers.

Lack of excess air over the fuel bed.

The economical management of a boiler room, whether it be an Apartment Block or Manufacturing premises, should be of the greatest importance. In my opinion, it would be to the interest of the owners to become more interested in the engineers and firemen, and not to look on a boiler room as a place to avoid. In many cases firemen are simply tolerated and are not recognized as skilled workmen, yet I doubt whether there are many other workers who have the same opportunity of wasting the employer's money. In my opinion, if these firemen were placed and recognized in a monetary sense as skilled workers, it would prove economical to owners of the premises concerned.

Lack of economical management of a plant is of little interest to the general public; but when, by reason of the waste in fuel, we find undue fouling of the atmosphere with smoke, the matter becomes of vital interest to citizens.

The atmosphere, in a sense, is food, and the public are entitled to prevent the fouling of same. It is just as important as a pure water supply.

Questions regarding the comparative values of American and Canadian coal, as regards cost and heat value, have been asked many times during the past year.

Naturally it is policy to be very guarded in any statement I make, as it may be construed into an unfair favouring of certain coal.

From the consumer's viewpoint he should first understand that the value of a coal is what he can get out of it. No matter what coal he intends burning, it is necessary if economy has to be observed, that his boiler installation be in good condition. Narrow air spaces in grate bars are not suitable for high ash coals; air leaks reduce the draft and cool the furnace temperature; low boiler settings are not suitable for high volatile coals; adequate draft is necessary; undue overloading is not economy and regular attention to prevent the retention of carbon on heating surface of boilers is required. If the foregoing points are attended to and the fireman is acquainted with the elementary principles of combustion, economical results will follow and the emission of objectionable smoke be eliminated.

During the past few years there has been a great reduction in the amount of Anthracite coal used for domestic heating, and of course a

corresponding increase in the consumption of sub-bituminous coal from Alberta is shown.

This has considerably increased the volume of smoke emitted from chimneys of dwellings and the smaller buildings and is especially noticeable in the vicinity of comparatively low chimneys. Conditions are aggravated under certain atmospheric conditions.

The smoke density cannot be classed as objectionable, being grey and light grey in colour. Still, if more care was exercised in firing, better results in combustion could be obtained resulting in a lighter shade smoke being emitted.

We are still without the legislation required in order to regulate the smoke from locomotives.

Some years ago application was made to the Railway Commissioners of Canada without success.

I am of the opinion that further application should be made in the near future.

The railways at the present time are responsible for the greater portion of the smoke which at times hovers over the City. This is especially noticeable when the wind is in the South or North direction where the Yards and Roundhouses are located. There is no reason why dense smoke from locomotives cannot be reduced to a minimum.

Defective hot air furnaces have been the cause of a number of complaints, and as dwellings become older a proportionate increase in the number is expected.

Such defects may be the cause of impaired health of persons throughout the Winter months, due to inhaling the gaseous products of combustion containing Carbon-monoxide. Possible defects are many and varied which results in the products of combustion gaining access to the hot air chamber and thence to the various rooms throughout the dwelling.

Fortunately, there has been no fatal cases. In one instance, however, a person was overcome by Carbon-monoxide fumes but was able to phone a neighbour before collapsing. The cause was due in this case to a choked chimney flue. Coke was used as fuel.

Undue depreciation of hot air furnaces, resulting in destruction of firepots, is more often due to lack of cold air volume. This is often the case in the older dwellings. In other instances cold air registers are covered, or partially so, with floor coverings.

When the volume of air to the rooms is deficient there is a tendency to increase the air temperature of the furnace by the addition of more fuel. The result is to destroy the firepot and incidentally create other defects, principally in radiation flues, due to warping of the plates.

Needless to say, a deficiency of cold air supply to the furnace means inefficiency of heating and waste of fuel.

There are instances where (especially in the older type furnaces where no provision is made for cleaning of ash, etc.) the radiation flue is seldom cleaned even after the heating season. This reduces the heating area appreciably and moreover affects the draft which often leads to considerable annoyance due to the products of combustion gaining access to the cellar through the air ports in the firing door.

From the economy viewpoint one cannot accurately judge the cost in heating a dwelling due to the variation in construction. Nevertheless, if care is exercised an appreciable saving may be made. A few points in this respect may be suggested.

Consider the first cost from the following viewpoints:

Furnace of adequate size, proper proportioning of the cold and hot air ducts (these should be equal in area), proper location of hot and cold air registers to ensure proper circulation, adequate available area of registers.

Furnaces vary in their suitability for burning economically certain kinds and sizes of fuel. It is worth while to experiment on different kinds and sizes. Bituminous coal, however, is not satisfactory for hot air furnaces. Semi-bituminous (Pocahontas), sub-bituminous (commonly known as Alberta or Drumheller area coals), and coke are suitable.

Do not let the fire burn too low before re-firing. Fire on one side and leave sufficient burning fuel to ignite the gases from the freshly fired coal as it is distilled.

Allow access of air through the firing door air ports to promote combustion.

Keep all heating surface free from soot, including removal of ash from the radiation flue.

Heating systems may fail during the more severe weather due to inadequate draft. If a reduced draft is noticed, one of the following may be the cause:

Chimney not sufficiently high or may be near a higher building. Wind in this direction may cause a down draft. A special cowl on the terminal should be effective.

Radiation flue, smoke pipe or chimney may require cleaning or a brick may have become displaced, partially choking the flue.

Leaky smoke pipe connection to chimney.

Hand damper may be closed on smoke pipe.

Length of smoke pipe may be too long and draft further reduced by a number of bends.

Clinker clogging the furnace grates.

Attention to the above details would, in many cases, prove beneficial both from a health and monetary viewpoint.

In addition to smoke abatement duties the following inspections have also been made:

Inspections of Hotels, Undertakers' Parlours, Steam Laundries, Private Hospitals, Public Baths and Swimming Pools, Comfort Stations and Garages, in addition to other special inspections in connection with Departmental work.

Your obedient servant,

P. PICKERING,

Smoke and Supervising Inspector.

# Report of Chief Dairy Inspector

A. J. Douglas, Esq., M.D.,
Medical Health Officer.

Dear Sir:

I have the honour to submit herewith a report covering the work of the Dairy Division for the year 1927.

Due to unusual and adverse weather conditions, the Manitoba farmer suffered severely during this year.

Spring arrived later than usual, and the heavy rains kept the land water-logged, delayed seeding and other farm operations, and in some districts kept the land flooded until all hope of sowing grain had passed.

In spite of these conditions, crops looked good in midsummer; but an early frost with rust appearing at a later date, caused a serious reduction in the yield of all Manitoba grain crops.

Weather unsuitable for grain production, may also be unsuitable for milk production. Cows grazing on soggy pastures, and plagued with mosquitoes do not produce to the best advantage.

Feed was not too plentiful the previous Winter, and many herds did not come through in as good condition as is desirable, the consequence being a decrease in dairy production for the first time in many years.

The steady high price for beef, while compensating the farmer for reductions in other sources of revenue, caused a tendency to feed off and dispose of many animals which would otherwise have been retained in the herd.

Milk and cream shippers were tempted by the high prices offered by, or on behalf of, our local dairymen, and in many cases disposed of large numbers of their best milch cows; to such an extent did this reduction in country herds take place, that by the Fall of 1927 we almost experienced a milk shortage, something unknown for the past 6 or 7 years. However, we imagine the danger is now a thing of the past, most of the herds being replenished, either by natural increases, or by importations from Eastern Canada.

## The Winnipeg Milk Supply

The milk supply of Winnipeg is based on the Dairy By-law of 1922, the Manitoba Health Act, and the Federal Municipal Tuberculosis order. Under these regulations all milk sold for consumption in the raw state must be from approved dairies having tuberculin tested herds, while all other milk or cream must be pasteurized.

It is not our intention to apologize for the existence of a By-law which allows for the sale of raw milk. It was the best we could get in 1922, and at that time is was considered a big step upward, and was hailed by all interested parties as a forward movement of the first magnitude.

These regulations have ensured that raw milk for consumption comes from healthy animals, and that the danger of our children becoming infected with bovine tuberculosis has been practically eliminated.

The regulations governing pasteurization embodied in the same by-law, specify the holding system with recording thermostatic control, which enables us to state with confidence that pasteurization, as conducted in this City, is not merely a name or a commercial operation, but that it is a highly technical process, based on exact scientific principles giving to the term "pasteurization" its true significance.

Just so long as the regulations continue to give the consumer the choice of two varieties of milk, must we devote our efforts towards ensuring that each of these varieties shall be of good quality, clean and wholesome, and safe.

The margin of safety with any milk depends to a great extent on the intelligent supervision available and in operation at all stages during production, handling and delivery to the consumer.

It is doubtful if any supervision could be 100% efficient, and even after reaching the consumer, milk may still not be clear of contaminating influences.

Citizens of Winnipeg consume daily 16,000 gallons of milk, 5,000 quarts of sweet cream, 5,000 quarts of ice cream, 16,000 pounds of butter, and 2,000 pounds of cheese.

The consumer pays for these commodities at average prices, a matter of $21,000 per day, and this amounts in one year to the handsome total of $7,665,000.00.

Practically the whole of this dairy produce is delivered directly or indirectly to the consumer, and for this purpose approximately 400 vehicles are constantly employed, of which number, 345 are engaged in house to house delivery of milk and cream, with the balance conveying butter and ice cream to stores, etc., or picking up shipments at the Depots, and conveying same to the various plants.

When we consider the fact that this City in a short time, and well within the memory of many still living, sprang up from a trading post of a few score inhabitants to become a great City approaching the quarter million mark, and that the majority of our citizens have at some time or other resided in rural districts, we will no longer wonder why there are many who still nurse a preference for raw milk.

It is this predilection which has kept the raw milk vendor in business, and enables him to still retain a matter of 40% of the total City trade.

That pasteurized milk, however, has its friends, and is slowly but surely gaining ground, is well evidenced by the fact that during the past 20 years the consumption of pasteurized milk has increased from 3% to 60%.

Considering that this has happened without the aid of any special or paternal legislation, it must be evident, now that pasteurization is firmly established and daily becoming better understood, with an ever increasing army of converts and advocates; that the day is not far distant when raw milk, handled in open cans, will be a thing of the past.

## Milk Vendors

All milk dealers or producers who put on a daily house to house delivery service have to take out a vendor's license. Restaurants selling milk by the glass for consumption on the premises, and grocery stores selling milk by the bottle to be carried off the premises, do not require to be licensed, because the milk they handle has been received from a licensed vendor, and the secondary sale of same is only a matter of public convenience, or a side line to the storekeeper.

"Dairy Licenses" are issued to the vendors who keep their own cows and distribute their own product only, and the fee charged is based on the number of milch cows maintained on the dairy.

"Milk Depot Licenses" are issued to those who operate a milk plant and handle milk shipped in from the country, and in this case the fee is based on the number of delivery vehicles employed.

In view of the fact that the License year ends May 31st, this report covers the balance of the year to December 31st, as during this period practically all licenses are issued, and there are usually no changes from New Year to Spring.

During the license season, 125 Dairy Licenses were issued, one was transferred, one cancelled, and two discontinued in business, leaving a total of 122 in active operation as against 123 for 1926.

Ten Milk Depot licenses were issued, of which three were cancelled, leaving seven in active operation.

All cancellations were due to business changes and not for cause.

| | 1926 | 1927 |
|---|---|---|
| Dairy Licenses issued | 125 | 125 |
| Dairy Licenses active | 123 | 122 |
| Depot Licenses issued | 8 | 10 |
| Depot Licenses active | 7 | 7 |
| Total Licenses issued | 133 | 135 |
| Total Licenses active | 130 | 129 |

Revenue derived from License fees, etc., amounted to $2,713.50, based on the following particulars.

| | | |
|---|---|---|
| 1,218 cows @ $1.00 per head | $1,218.00 | |
| 1,925 cows @ 50c. per head | 962.50 | |
| Total for Dairy Licenses | | $2,180.50 |
| 176 vehicles @ $2.00 each | $ 352.00 | |
| 16 vehicles @ $10.00 each | 160.00 | |
| Total for Depot Licenses | | $ 512.00 |
| 1 transfer @ $2.00 | | 2.00 |
| 38 inspection fees @ 50c. | | 19.00 |
| | | $2,713.50 |

## Classification of Licenses

| | 1922 | 1923 | 1924 | 1926 | 1927 |
|---|---|---|---|---|---|
| Dairies, raw milk | 104 | 114 | 119 | 123 | 122 |
| Depots, raw milk | 2 | 2 | 2 | 1 | 0 |
| Pasteurizers, small | 2 | 2 | 2 | 4 | 5 |
| Pasteurizers, large | 2 | 2 | 2 | 2 | 2 |
| Total | 110 | 120 | 125 | 130 | 129 |

## The Licensed Dairies

The majority of these dairies are located in the municipalities immediately adjacent to Winnipeg; a small number are still located within the City Limits, and a few odd ones are located at a considerable distance away from the City. The round trip distance to these dairies runs from 10 miles to 55 miles, with an average of 15 to 20 miles. Owing to the search for pasture and more suitable locations, and the improvements to the main highways, dairies have moved further out so that the average distance now is double that of 10 years ago, and three times that of 20 years ago. The majority of these dairies are owned by the occupant who considers the milk business as his main occupation, and by retailing his own product he has been enabled to retain the ultimate profit to his own advantage.

The smallest licensed dairy herd contains 5 cows and the largest 150 cows, the average being approximately 30 head per herd. These herds are all tuberculin tested and very stringent regulations are imposed by the Federal Department of Agriculture in order to ensure beneficial and permanent results.

The original regulations require the animals to be housed in stables with a minimum of 2 square feet window area per cow, 500 cubic feet

air space per cow, impervious floors, suitable drainage and ventilation. From time to time additional regulations are formulated, all with a view to ensuring healthy conditions under which the animal shall be kept, or to close some loophole which might allow infection to make contact with the herd. Suitable permanent isolation quarters must be provided for all additional cattle purchased, and even should such animals pass the test, they must still be kept under suitable conditions of isolation as shall ensure the main herd against contact infection. Whenever any reactors or suspicious cases are found in a herd, they are immediately removed, the premises disinfected, and the whole herd placed under a sixty day quarantine regulation, until such time as a clean re-test is obtained.

Unprotected manure piles are not allowed, and all open drains, ditches, etc., must be fenced or enclosed in such manner as to prevent cattle having access to same.

These regulations have been of great assistance to us in ensuring a better state of cleanliness in regard to buildings and surroundings.

Enforcing lime-washing of stables, removal of manure, and the filling up of low stagnant pools, kept us very busy in former days; while we are now enabled to devote more of our attention to the higher problems of milk production and handling.

The two certified milk farms are included with these licensed dairies and they bottle their entire product on the farm, which is kept under constant supervision by the Provincial Health Board.

About a dozen of these dairies have installed milk bottling apparatus, but a larger number bottle a portion of their milk by hand, and have no suitable apparatus for such purpose.

Our policy has been not to encourage the bottling of milk on the farm unless suitable equipment for the cleansing and sterilization of bottles was installed, together with a machine filler and capper; while in addition we endeavour to ensure that the individual is a person likely to carry on and operate under proper sanitary conditions.

The licensed dairymen distributing their own product employ one or two delivery wagons each, and it has been customary for many years for many of them to adopt some motto or slogan, painted in conspicuous letters on their wagons. During the past few years some of these mottoes appear to have taken on a double meaning and it was evident that some dairymen were sailing pretty close to the weather as regards business ethics; and were allowing the public to misinterpret their slogan advertising. The Provincial Health Board passed a suitable regulation and requested us to enforce same when the 1927 Licenses were issued.

By this time fully 75% of the dairymen were offenders, but by approaching the problem in a suitable manner we were enabled to handle the situation; and within three months after the first license was issued, all offending advertising was erased, or replaced by something which met with approval.

## The Licensed Milk Depots

Up to 1910, milk depots had no legal status, and licenses issued pertained to dairies keping cows; or if the milk was distributed by some other party than those producing same, the license was designated as a "milk exchange;" and the holder was permitted to deal in milk. No premises or place of business was required, and the entire equipment of the dealer might consist of a horse and delivery outfit. In 1910 the difficulties of the situation were recognized, and it was considered advisable to introduce suitable regulations designed to cope with the situation. At that time some half dozen "milk exchange" licenses were in use, the holders having a small shack at the rear of their dwellings, where it was customary to store milk and utensils. Owing to the small investment, more applications were coming in, and the difficulty of endeavouring to supervise such milk at the point of production became more acute; while responsibility for any contamination or abnormal condition was divided in such a manner that real control was almost impossible. A set of regulations were drawn up and approved by the Provincial Health Board, later becoming embodied in the Manitoba Health Act, 1911. These are known as the "Milk Depot Regulations," and define a Milk Depot as any place where milk or cream is collected and prepared for distribution. Minimum requirements for the building and equipment are given, together with methods of operation. Pasteurization and bottling are provided for, but are not compulsory, while lists of shippers must be furnished the Department.

However, these regulations gave us the control desired at the time, and have continued in force, being embodied in our 1922 Dairy By-law, which was supplemented with a clause defining pasteurization, and providing that all milk from herds not tuberculin tested must be pasteurized.

In 1922 a number of these small Milk Depots were in existence, about half of which handled raw milk. These, in order to conform with the new regulations, had to arrange to obtain their product from a tuberculin tested herd, or as an alternative install pasteurizing equipment.

A few continued handling raw milk, but in 1927 the last of this class was eliminated, the Department allowing them the privilege of purchasing their supplies of pasteurized milk from an approved plant.

In previous years we have never had more than two large and two small pasteurizing plants; but during 1927 two new plants were constructed, which, while not of large capacity, are easily capable of expansion, and are equipped with the latest improved machinery.

Another improvement brought to a successful head during the year, was the installation of recording thermostats on every pasteurizer.

The large plants have had these instruments in use for many years; but the smaller single vat plants had depended on the thermometer only.

We are thus now enabled to keep a complete check on all pasteurizing operations, and can examine the records for any day or any period.

The matter of possible dead ends or faulty valves has received our attention, and we are glad to note that one of our new plants has installed the jacketed valve, where the incoming hot water circulates around the valve, before passing on into the heating system, thus ensuring that any milk in the valve or collar, shall be heated first and possibly to a higher temperature, thus ensuring circulation and complete pasteurization. One of our large companies has commenced the installation of similar equipment, and we believe that the others will give the matter consideration.

It will be noted that at one time during 1927 we had 10 Depot Licenses issued, of which 3 are now out of business. Of these 3, one was a country pasteurizer with one customer in town; losing this customer, the plant was dismantled. Another sold his business to one of the new firms, and this plant was dismantled. The third was a former dairyman, who after inducing his customers to change from raw to pasteurized milk, was unable to carry on or to provide suitable premises and equipment.

Of the 7 Depot Licenses now active, 6 are pasteurizing plants, while the seventh purchases his supply from another plant.

In view of the fact that all our Depots now handle pasteurized milk and that the raw milk depots have been eliminated, we shall expect for the future to refer to them as "Pasteurizing Plants" as the term "Depot" appears to be as much out of place now, as was the term "Exchange" 15 years ago.

## The Pasteurizing Plants

These 6 plants handle 60% of the milk business of the City, including the 58% pasteurized and 2% certified; they are in most cases splendidly equipped and are ready and capable of handling much more business than they do at present. We have never had much trouble with these plants, as the leading ones have always anticipated and kept well in advance of any regulation.

With solid financial backing they are in a position to take advantage of any new device in the shape of machinery or equipment, and they have no hesitation in scrapping and replacing, at whatever cost, any machine which is found faulty, deficient or out of date. The City plants are first class in every particular, and could hold their own in any City on the American continent.

## The Tuberculin Test

The tuberculin test of all licensed Dairy Herds is administered by the Veterinary Inspectors of the Federal Department of Agriculture, Health of Animals Branch; and in very few cases have any abnormal conditions been found. A few outbreaks, however, occurred where herds had apparently become re-infected after being clear for a period. Placing on one side the slight possibility of herds becoming infected through the

medium of additions, or of unknown or indirect contact with untested animals; it is just possible that the wet season may have been responsible. Pastures and corrals were wet and soft in many places, and parts never got thoroughly dry during the entire grazing season; so that cattle were constantly plowing up old ground with their feet, and getting into stagnant pools, etc. If any infection was around, the sun was unable to get in its best work as a germicide, and cattle may have become diseased through grazing on infected ground. Many dairymen have now purchased or leased vacant land for pasture, in order to be as free as possible from allowing contact with other cattle; because it is a well known fact, that in no case where a herd had its own private fenced pasture, did an outbreak occur.

However, such happenings are rare and provide a valuable object lesson for those who are inclined to be careless, as it is evident that in order to be successful in maintaining a herd free from tuberculosis, full advantage must be taken of all knowledge gained, and strict observance of all regulations must be followed, if economic losses have to be avoided.

During the Fall, we found that some unlicensed dairymen were purchasing reactors at a low price from dealers, with a view to producing milk for sale to the pasteurizing plants, or in outside municipalities. We co-operated with the Provincial Health Board and the Municipal Health Officers in handling this matter, and succeeded in having a number of such animals slaughtered, or returned to the dealer responsible. We believe that the practice has been discontinued, but in view of the fact that the dealer receives no compensation, the temptation is still there, so that this is a feature which will stand watching.

For the year ending March 31st, 1927, a total of 6,594 cattle were subjected to the tuberculin test, involving 125 dairy herds. Of this number, 2,924 cattle were subjected to a first test, while 10,677 re-tests were made, making a total of 13,601 tests for the year.

For purposes of comparison, the figures below are given for the past two years.

| | Year ending Mar. 31, 1926 | Year ending Mar. 31, 1927 |
|---|---|---|
| Dairy herds under the test | 129 | 125 |
| Clean herds at last general test | 99 | 101 |
| Cattle tested during the year | 7,003 | 6,594 |
| Cattle submitted to a first test | 3,419 | 2,924 |
| Re-tests conducted | 10,373 | 10,677 |
| Total tests conducted | 13,792 | 13,601 |
| Reactors slaughtered | 901 | 616 |
| Compensation paid | $28,768.16 | $19,009.66 |

It will be noted that the number of cattle tested, and the total tests conducted, were very similar for the two years; yet the number of reactors slaughtered, and the amount of compensation paid, has been

reduced by about one third. Of the 616 reactors, 312 were found in the herds, while 304 were found in the additions. At the last general test on all herds, 101 out of 125 were found free from disease. This condition has also been very constant for a number of years, as at each general test, around 100 herds have been found clear.

## Milk Consumption

Approximately 16,000 gallons of milk are consumed daily in Winnipeg, showing an increase of 500 gallons over the previous year. This increase is almost pro rata with the increase in population, although a slight increase in per capita consumption is noted. Of the total daily supply the Licensed Dairies handle 6,000 gallons of raw milk, the private cow keepers are credited with 220 gallons; while the Licensed Pasteurizing Plants handle 9,280 gallons of pasteurized milk, 320 gallons of Certified milk, and 180 gallons of Special Raw milk of a grade practically similar to Certified.

The amount of cream consumed is approximately 1,312½ gallons, or 21,000 half pints per day.

On a milk and cream basis we may say that the daily consumption is 85,000 quarts, allowing that each half pint of cream has a value equivalent to a quart of milk.

### Classification of Daily Supply

| | | |
|---|---|---|
| Pasteurized milk | 9,280 gallons | =37,120 quarts |
| Raw milk | 6,400 " | =25,600 " |
| Certified milk | 320 " | = 1,280 " |
| Total fluid milk | 16,000 gallons | =64,000 quarts |
| Pasteurized cream, bottled | 575 gallons | = 9,200 half-pints |
| Raw cream | 87.5 " | = 1,400 " |
| Pasteurized cream, bulk | 650 " | =10,400 " |
| Total cream | 1,312.5 " | =21,000 " |

### Percentage Classification

| | 1926 | 1927 |
|---|---|---|
| Pasteurized milk | 57% | 58% |
| Raw milk, Tuberculin tested herds | 41%. | 40% |
| Certified milk | 2% | 2% |

The very slight gain accorded to pasteurized over raw milk, from 1926 to 1927, amounting to only 1%, would indicate that according to this rate, it would take over 40 years for pasteurization to attain 100%; unless in the meantime some stimulus were applied. This is altogether too slow; improvements considered necessary should be quickly forth-

coming, and this condition merely illustrates the entrenched position which raw milk has attained in the minds of a considerable number of our citizens.

## Consumption and Distribution

| | Pints per Capita | Gallons per day | Delivery Vehicles |
|---|---|---|---|
| 1919 | 0.52 | 13,000 | 230 |
| 1920 | 0.54 | 13,000 | 220 |
| 1921 | 0.55 | 13,500 | 240 |
| 1922 | 0.58 | 14,500 | 275 |
| 1923 | 0.60 | 15,000 | 300 |
| 1924 | 0.62 | 15,250 | 315 |
| 1925 | 0.62 | 15,250 | 330 |
| 1926 | 0.63 | 15,500 | 335 |
| 1927 | 0.64 | 16,000 | 345 |

It will be noted that the number of delivery vehicles shows a steady increase, which indicates that no economies are being affected, and that overlapping is still rampant. We now have 125 more vehicles than we had in 1920, and yet only 3,000 gallons more milk is being handled, which is at the rate of 24 gallons per additional wagon; while the average load for the entire supply is less than 50 on a milk-gallon basis, and less than 250 on a milk-cream-quart basis.

## Daily Per Capita Consumption, 1927

| | |
|---|---|
| Fluid milk only, Imperial measure | 0.64 pints |
| Milk and Cream basis, Imperial measure | 0.85 pints |
| Fluid milk only, U.S. measure | 0.80 pints |
| Milk and Cream basis, U.S. measure | 1.06 pints |

## Clean Milk

For the past few years we have endeavoured to create an intelligent interest in the production of clean milk with a low bacteria content, making use of the Plate Count and the Sediment test as a means of demonstrating what can be done along these lines. The results show that some of our older dairymen of good reputation and long experience fail to get a low count, and cannot do better than No. 2 on the Sediment test. It is just possible that some of these, having travelled in the same groove for so many years, find difficulty in breaking away, and running along different lines. For instance, we find some who handle their milk splendidly as regards cooling, storage and delivery; but fall down on the sediment test because of too much reliance on the milk strainer.

We endeavour to convince these that the strainer is only an additional precaution, and that with clean cows, clean udders, and clean milkers, the only use for the strainer is to catch stray hairs or chaff which may be floating in the stable air.

We remind them that only one dirty udder in the herd may foul an otherwise clean strainer, and so contaminate the entire milk of the herd, unless the strainer was immediately changed; and even then quite a percentage of the contamination has passed through the strainer, and is still in the milk.

A small number of dairies are able to produce a No. 1 Sediment test continuously for the entire year.

The great advantage of the Sediment test is that we are able to demonstrate to the producer at first hand just how much dirt is in the milk, and in addition we are able in most cases to determine the variety and cause of such sediment as may appear.

Should the producer endeavour to improve, and be enabled to eliminate the cause, then we are in a position to demonstrate that this is so, and that the measures employed have been successful.

## Bacteria in Milk

All market milk contains bacteria in greater or less numbers, and under normal conditions the number found may be an index of the manner in which the milk has been produced, handled or treated. Therefore, the producer who is informed on these matters, and who applies such knowledge in an intelligent manner, is enabled to produce a milk showing a reasonable low bacteria content. The production of Certified milk demonstrates what can be done in the way of controlling bacteria content; and the maximum number allowed in such milk ranges from 5,000 to 10,000 according to season.

In our 1925 report, we mentioned that not so many years previous, plate counts as low as 5,000 or 10,000 were practically unknown in our field of operation. In 1926 we remarked that such counts were becoming quite frequent with occasional ones going as low as 1,000 and 2,000.

In 1927, out of 454 examinations successfully completed, we had 22 with a plate count of 1,000 or less; and these low results were shared by all classes of milk; viz.:—Certified milk on 5 occasions; Special milk on 3 occasions; Pasteurized milk on 4 occasion, one Raw milk Dairy on 7 occasions; while 3 Raw milk Dairies obtained 1 each.

That the essentials for producing low count milk are simple and within the reach of everybody is demonstrated by the showing made by one Raw milk Dairy; where the premises and surroundings were poor and dilapidated, and far from sanitary; so much so, that a complaint was lodged with the Department suggesting that this dairy be closed.

A visit to the dairy just after the evening milking showed a few striking features; first the beautiful, clean, white udders of the cows; and secondly, the spotless condition of the milk house, with the milk cooled to 40°F. and in iced storage. This dairyman was so interested in maintaining a low count, that he showed disappointment on the comparatively few occasions on which his milk went over 5,000.

To the producer enquiring as to the best means of obtaining and preserving a low count, we can only advise; cleanliness in everything during milking and handling; efficient cooling without delay; suitable cold storage, and suitable protection during delivery. This may be summed up in three words, "clean", "cool", and "careful."

The wide variations found in pasteurized milk, are due to the various conditions in whih milk is received from the country; consequently, a plant receiving shipments from select dairies only, is able to achieve results of a more uniform character.

The following table shows the results of plate counts for the year in colonies per c.c.

**PLATE COUNTS—1927**

| | Under 1000 | 1000 | 1000 to 5000 | 5000 to 10000 | 10000 to 25000 | 25000 to 50000 | 50000 to 100000 | Over 100000 | Total |
|---|---|---|---|---|---|---|---|---|---|
| January | .... | 1 | 3 | 5 | 9 | 4 | 6 | 7 | 35 |
| February | .... | 1 | 6 | 4 | 9 | 4 | 4 | 10 | 38 |
| March | .... | 2 | 2 | 8 | 7 | 9 | 5 | 5 | 38 |
| April | .... | 1 | 7 | 3 | 3 | 7 | 9 | 9 | 38 |
| May | 2 | 1 | 4 | 5 | 1 | 3 | 9 | 10 | 35 |
| June | 2 | 2 | 4 | 1 | 7 | 12 | 7 | 12 | 47 |
| July | 1 | 5 | 1 | 2 | 2 | 6 | 4 | 11 | 32 |
| August | .... | 2 | 4 | 3 | 7 | 3 | 14 | 15 | 48 |
| September | .... | .... | 1 | 2 | 8 | 7 | 5 | 13 | 36 |
| October | .... | 1 | 3 | 8 | 6 | 3 | 1 | 11 | 33 |
| November | .... | .... | 5 | 5 | 11 | 3 | 6 | 7 | 37 |
| December | 2 | .... | 4 | 6 | 5 | 11 | 2 | 8 | 38 |
| Total | 7 | 15 | 44 | 52 | 75 | 72 | 72 | 118 | 454 |

With our present facilities, the number of samples we can handle for plate counts, is around 500 per year.

It is evident that with 130 licensed vendors, several of whom handle more than one brand of milk; that any attempt to examine carefully all these milks would only give results of little or no value. Significances of this work can only apply through the means of a continuous record; as for example, the Provincial Laboratory gives almost daily attention to the two Certified milks; and if we attempted anything like this, all our work would be concentrated on three or four dairies. On the understanding that nothing worth while could be attained by testing less than once per month, we select a number of dairies handling bottled milk, including all those dealing in pasteurized, certified, or so-called special milk, and allocate the samples according to the output or importance of the dairy; giving none less than a monthly examination, while some are examined two, three or four times per month. Thus during the course of a year, we have a continuous record covering twelve months examination, each milk side by side with milk of the same category, and any opinion we may express, or any report we may issue, is based on the

twelve month period, and must have some bearing on the average condition of the milk.

## Quality of Milk

As a result of many tests, we conclude that the general run of milk was of fair average quality during the year. Butter fat content has its fluctuations, and at certain periods we find almost all milks high (around 4%); while at other times they may run at a lower level. A few suspicious cases were closely followed and checked up; while in one case where deliberate abstraction of butter fat was suspected, Police Court proceedings were instituted, and a conviction obtained. The very small number of complaints received would indicate that the great majority of consumers are well satisfied with the milk they are receiving.

## Keeping Qualities of Milk

Not so many years ago it was quite a common occurrence for us to receive and investigate complaints of milk going sour, and in many cases it was difficult to decide whether the vendor or the consumer was at fault. The fact that more dairies now have efficient coolers, with a deep well system of cold water, and ice for the summer, with good storage facilities; may have something to do with the cessation of the complaints.

We believe, however, that the householders have also improved their methods of keeping milk, more making use of ice and refrigerators or other conveniences, and in not allowing milk to stand in the sun on the door step or window sill, and in many ways have contributed a share towards the problem of keeping milk sweet and wholesome.

## Milk and Health

As a precautionary measure, all cases of sickness reported or suspected on dairies were investigated; and the majority found to be of a non-communicable character. In no case during the year was it found necessary to employ extraordinary measures, the dairyman usually co-operating and sometimes anticipating our desires.

We are pleased to be able to report that nothing in the shape of a milk-borne outbreak occurred, and at no time during the year did we have reason to fear, or expect anything of that nature to take place.

## Milk and Dairy Inspection, 1927

### Summary of Inspections

| | |
|---|---|
| Cow keepers stables inspected | 37 |
| Dealers and Sales stables inspected | 57 |
| Pasteurizing apparatus inspected | 247 |
| City Milk Depots inspected | 111 |
| City Creameries inspected | 374 |
| Delivery vehicles inspected | 3,777 |
| Special City Inspections or Investigations | 83 |
| Total City Inspections | 4,686 |
| Licensed Dairies inspected | 1,204 |
| Milk and cream shippers inspected | 90 |
| Milk and cream stations visited | 16 |
| Country Creameries visited | 10 |
| Country Milk Depots inspected | 33 |
| Special Country Inspections or Investigations | 129 |
| Total Country Inspections | 1,482 |
| Milk tested for Butter Fat and Solids | 1,757 |
| Cream tested for Butter Fat | 128 |
| Special Plate Counts for bacteria content | 492 |
| Sediment Tests for cleanliness | 1,145 |
| Chemical Tests for adulteration | 473 |
| Total Tests and Examinations | 3,995 |
| Milk and Cream condemned (lbs.) | 6,102 |
| Value of condemned product | $214.00 |
| Notices served or mailed | 1,292 |
| Cases of sickness investigated | 15 |
| Mileage—Country | 10,630 |

## The Dairy Industry

It is interesting to note that approximately 15½ million pounds of creamery butter, and almost one million pounds of cheese, was manufactured in Manitoba during the year; and that 250 carloads of butter were exported. The total value of milk products was estimated at $14,269,684 at production prices. For reasons mentioned in the earlier part of this report, production was slightly lower than in the previous year. From conditions observed, and the trend of the rural population towards the urban centres, it is evident that Dairy Farming, Stock Rais-

ing, and Mixed Farming of every description requires careful nurturing and real encouragement, if a desirable balance has to be maintained.

It is strange to see abandoned farm-steads on which someone resided for 20 or 30 years, making a living and raising a family, with prices for produce less than half of what they are today.

## Milk Prices in Cities

Last year we quoted the rètail milk prices pertaining to a number of Canadian and American cities, and we are giving similar information for the year 1927.

### 1927 Prices of Pasteurized Milk for 17 Canadian Cities, delivered bottled to the consumer, per 40 oz. quart

| | March cents | June cents | September cents | December cents |
|---|---|---|---|---|
| Victoria, B.C. | 14 | 12½ | 12½ | 14 |
| Vancouver, B.C. | 13 | 11 | 11 | 11 |
| Calgary, Alta. | 12 | 11 | 11 | 12 |
| Edmonton, Alta. | 12½ | 10 | 11 | 12½ |
| Saskatoon, Sask. | 12 | 13 | 13 | 13 |
| Regina, Sask. | 13 | 12½ | 12½ | 12½ |
| Winnipeg, Man. | 12 | 12 | 12 | 13 |
| Fort Wlliam, Ont. | 14¼ | 12½ | 12½ | 14¼ |
| London, Ont. | 10 | 10 | 10 | 11 |
| Hamilton, Ont. | 13 | 12 | 12 | 13 |
| Brantford, Ont. | 11½ | 11½ | 11½ | 11½ |
| Toronto, Ont. | 14 | 13 | 14 | 14 |
| Ottawa, Ont. | 11 | 10 | 10 | 12 |
| Montreal, P.Q. | 14 | 12 | 12 | 14 |
| Sherbrooke, P.Q. | 10 | 10 | 12 | 12 |
| Halifax, N.S. | 14 | 14 | 14 | 12 |
| St. John, N.B. | 14 | 14 | 14 | 14 |

### 1927 Prices of Pasteurized Milk for 24 U.S. Cities, delivered bottled to the consumer, per 32 oz. quart

| | March cents | June cents | September cents | December cents |
|---|---|---|---|---|
| Birmingham, Ala. | 17 | 17 | 17 | 17 |
| San Francisco, Cal. | 14 | 14 | 14 | 14 |
| Denver, Colo. | 12 | 12 | 12 | .... |
| Hartford, Conn. | 16 | 16 | 16 | 16 |
| Washington, D.C. | 15 | 15 | 15 | 15 |
| Miami, Fla. | 25 | 22 | 22 | 20 |
| Chicago, Ill. | 14 | 14 | 14 | 14 |

| | March cents | June cents | September cents | December cents |
|---|---|---|---|---|
| Indianapolis, Ind. | 12 | 12 | 12 | 12 |
| New Orleans, La. | 14 | 14 | 14 | 14 |
| Baltimore, Md. | 14 | 14 | 14 | 14 |
| Boston, Mass. | 14 | 14 | 15½ | 16½ |
| Detroit, Mich. | 14 | 14 | 13½ | 14 |
| Minneapolis, Minn. | 11 | 11 | 11 | 12 |
| St. Louis, Mo. | 13 | 13 | 13 | 13 |
| Atlantic City, N.J. | 15 | 15 | 15 | 15 |
| New York, N.Y. | 15 | 15 | 15 | 16 |
| Cincinnatti, Ohio | 14 | 14 | 14 | 14 |
| Portland, Ore. | 12 | 12 | 12 | .... |
| Pittsburg, Pa. | 15 | 14 | 14 | 15 |
| New Port, R.I. | 15 | 15 | 15 | 15½ |
| Salt Lake City, Ut. | 10 | .... | 11 | 11 |
| Richmond, Va. | 14 | 14 | 14 | 14 |
| Tacoma, Wash. | 10 | 10 | .... | 12½ |
| Milwaukee, Wis. | 11 | 11 | 11 | 11 |

In quoting milk prices as paid by the consumer, pasteurized milk in bottles is considered the basic class of milk, because the greater portion of the milk supply of all large cities and the entire supply of the majority quoted, is pasteurized and delivered to the consumer in bottles.

## Certified Milk

The highest grade of raw milk is that known as certified, and its combined qualities are based on ideal methods with the maximum degree of safety.

The use of the name "Certified" is considered a great privilege, jealously guarded so as to prevent any misrepresentation; and the conferring of this privilege is usually in the hands of a neutral Commission, or Board, holding legislative and administrative authority.

There are two Certified Milk Farms in Manitoba, under the supervision of the Provincial Health Board, each supplying this class of milk to the Winnipeg consumer; and each arranging with one or other of the large companies to handle their distribution.

In addition to the usual tuberculin test, these herds are kept under regular veterinary inspection; and any ailing or suspicious animal is isolated, and the use of milk from same prohibited. Feeds and pastures are supervised, while drainage and water supply are kept under observation, in order to ensure that the cows are maintained in a superior manner; they must be bedded with clean straw, and kept clipped and carefully groomed all the time. The udders must be washed before milking, using clean water and towels for that purpose; while the stable floors must be flushed at least twice daily. Specific sanitary conveniences and wash basin facilities must be provided for employees.

In connection with utensils, live steam must be on hand all the time, and a high pressure steam sterilization chamber provided through which all bottles, etc., must pass. The milk must be conveyed to the cooler immediately each cow is milked, and must be filled into clean sterilized bottles from an approved filler, and double capped; the outside cap being of the ring-hood type. The bottles are then placed in cold storage with a temperature below 40°. The maximum bacteria count allowed is 10,000 in Summer and 5,000 in Winter, as delivered to the consumer; while the milk must also be of high quality as regards butter fat and other solids; this being checked daily by the Provincial Laboratory.

All employees of the Dairy are kept under strict medical supervision, and are liable to isolation even on mere suspicion.

Precautions of such an elaborate nature cost time and money, and explain to some extent the higher price obtained for "Certified Milk."

The ultimate aim of all raw milk handlers should be to produce a milk of a standard equivalent to "Certified"; so that whatever happens they will be enabled to remain in business.

The greatest tribute that can be paid to Certified Milk is perhaps the fact that many Cities, having passed regulations forbidding the sale of raw milk, make an exception in favor of Certified. There are so many special features in regard to Certified Milk, that we are all the time attempting to educate our Raw Milk Dairies up to this standard, and with some small measure of success.

We have demonstrated that, by proper care, clean milk of a low bacteria content can be placed on the market; and by keeping about a dozen of our better class dairies under close supervision, we have succeeded in having a number of them produce a highly creditable milk. The gentlemen operating the Certified Milk Farms have shown a kindly and co-operative spirit in this regard, and have always gladly shown their premises and equipment, and explained their methods to visiting dairymen.

I have the honor to be,
Sir,
Your obedient servant,
E. C. BROWN,
Chief Dairy Inspector.

## DAIRY INSPECTIONS—1927

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| City Inspections: | | | | | | | | | | | | | |
| Cow keepers | .... | 1 | 5 | .... | 7 | .... | .... | 1 | .... | 14 | 5 | 4 | 37 |
| Cow dealers | 5 | 4 | 5 | 4 | 5 | 4 | .... | 7 | 5 | 5 | 7 | 6 | 57 |
| Pasteurizers | 19 | 16 | 20 | 20 | 25 | 21 | 10 | 20 | 17 | 16 | 31 | 32 | 247 |
| Milk depots | 12 | 6 | 7 | 7 | 11 | 8 | 9 | 9 | 6 | 10 | 10 | 16 | 111 |
| Creameries | 22 | 47 | 41 | 28 | 35 | 36 | 15 | 39 | 36 | 35 | 23 | 17 | 374 |
| Vehicles | 297 | 349 | 349 | 327 | 307 | 361 | 287 | 250 | 288 | 329 | 334 | 299 | 3777 |
| Special | 1 | 3 | .... | 12 | 41 | 8 | 4 | 4 | 3 | 1 | 3 | 3 | 83 |
| Total | 356 | 426 | 427 | 398 | 431 | 438 | 325 | 330 | 355 | 410 | 413 | 377 | 4686 |
| Notices: | | | | | | | | | | | | | |
| General | .... | 136 | .... | .... | 118 | .... | .... | .... | .... | .... | .... | .... | 254 |
| Special | 35 | .... | 8 | 4 | 8 | 6 | 20 | 7 | 2 | 7 | 15 | 15 | 127 |
| Formal | .... | 1 | 2 | .... | .... | 1 | .... | .... | 11 | 14 | 12 | .... | 41 |
| Verbal | 28 | 66 | 62 | 54 | 129 | 116 | 60 | 39 | 46 | 53 | 54 | 42 | 749 |
| Consultations | .... | 5 | 3 | 4 | 35 | 29 | 14 | 6 | 7 | 3 | 8 | 7 | 121 |
| Total | 63 | 208 | 75 | 62 | 290 | 152 | 94 | 52 | 66 | 77 | 89 | 64 | 1292 |

## DAIRY INSPECTIONS—1927—Continued

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Country Inspections: | | | | | | | | | | | | | |
| Licensed Dairies | 93 | 56 | 103 | 85 | 94 | 105 | 63 | 106 | 140 | 133 | 113 | 113 | 1204 |
| Milk Shippers | 3 | ..... | ..... | 12 | 7 | 4 | 10 | 10 | 6 | 6 | 15 | 3 | 76 |
| Cream Shippers | ..... | ..... | ..... | 3 | ..... | ..... | 1 | 10 | ..... | ..... | ..... | ..... | 14 |
| Milk Stations | ..... | ..... | 3 | 2 | ..... | ..... | ..... | ..... | 3 | 5 | 2 | ..... | 15 |
| Cream Stations | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Creameries | 1 | ..... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ..... | ..... | 2 | 10 |
| Milk Depots | 3 | ..... | 3 | 2 | 1 | 3 | 1 | 3 | 4 | 4 | 6 | 3 | 33 |
| Special | 2 | 7 | 7 | 17 | 4 | 22 | 16 | 9 | 12 | 15 | 12 | 6 | 129 |
| Total | 102 | 63 | 117 | 123 | 107 | 135 | 92 | 139 | 166 | 163 | 148 | 127 | 1482 |
| Mileage—Country: | | | | | | | | | | | | | |
| Inspector A | 200 | 240 | 580 | 365 | 290 | 520 | 550 | 800 | 500 | 660 | 700 | 660 | 6065 |
| " B | 125 | 85 | 170 | 130 | 140 | 145 | 115 | 155 | 305 | 360 | 255 | 255 | 2240 |
| " C | 145 | 10 | 215 | 210 | 175 | 370 | 35 | 185 | 295 | 230 | 260 | 195 | 2325 |
| Total | 470 | 335 | 965 | 705 | 605 | 1035 | 700 | 1140 | 1100 | 1250 | 1215 | 1110 | 10630 |

## DAIRY INSPECTIONS—1927—Continued

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Samples: | | | | | | | | | | | | | |
| Milk Tested | 142 | 148 | 163 | 167 | 134 | 165 | 108 | 122 | 151 | 155 | 174 | 128 | 1757 |
| Cream Tested | 10 | 13 | 13 | 11 | 5 | 10 | 11 | 9 | 10 | 9 | 14 | 13 | 128 |
| Plate Counts | 37 | 38 | 50 | 40 | 40 | 50 | 34 | 48 | 39 | 36 | 50 | 30 | 492 |
| Sediment Tests | 71 | 70 | 147 | 109 | 117 | 71 | 89 | 93 | 125 | 126 | 87 | 40 | 1145 |
| Chemical Tests | 37 | 39 | 50 | 40 | 40 | 50 | 34 | 48 | 39 | 36 | 50 | 10 | 473 |
| Total | 297 | 308 | 423 | 367 | 336 | 346 | 276 | 320 | 364 | 362 | 375 | 221 | 3995 |
| Condemnations: | | | | | | | | | | | | | |
| Milk, lbs. | 320 | 250 | 800 | ..... | 1520 | ..... | ..... | ..... | 210 | 2500 | ..... | 60 | 5660 |
| Cream, lbs. | ..... | ..... | 57 | ..... | 50 | ..... | ..... | 100 | 150 | 85 | ..... | ..... | 442 |
| Total | 320 | 250 | 857 | ..... | 1570 | ..... | ..... | 100 | 360 | 2585 | ..... | 60 | 6102 |
| Sickness Investigated: | | | | | | | | | | | | | |
| Communicable | 3 | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | 6 |
| All other cases | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 2 | 3 | 3 | ..... | 9 |
| Total | 3 | 1 | ..... | ..... | ..... | 1 | 1 | ..... | 2 | 3 | 3 | 1 | 15 |

# Report of Chief Food Inspector

A. J. Douglas, Esq., M.D.,
Medical Health Officer.

Dear Sir:

I herewith beg to report on the activities of the Food Division during the year 1927.

The number of places where food is manufactured, kept and prepared for sale increased from 1903 to 1909.

The year was fairly free from complaints of sickness due to the ingestion of food, there being only two complaints. One was from fish, which had been dipped in a preservative solution. This was reported to the Dominion authorities and action taken to prevent its occurring again. The other case seemed to point to a canned product, but injections and feedings to experimental animals proved negative.

One of the greatest improvements this year has been the reduction in fresh fruit condemnations. These have been the lowest on record, in some measure due to the cold Summer, but principally due to the efficient methods of handling the product during transportation. The Government control in British Columbia has resulted in a higher class product being marketed and prevented the glutting of any one market. In former years it was not uncommon for a carload to reach an already glutted market, only to be switched to another market with consequent loss to everyone concerned; the heaviest loss falling on the producer, resulting in failure.

The precautions taken by the American authorities in regard to Arsenical sprays have, as far as this market is concerned, been beneficial, no complaints having been recorded this year. This is very satisfactory in view of the amount of imported fruit and vegetables, and the widespread use of arsenical sprays on the growing product. Last year it is reported that 55,000,000 lbs. of Lead Arsenate, Calcium Arsenate and Paris Green, for use as sprays, was manufactured in the United States.

## Abattoirs

The abattoirs have all greatly improved their plants. One Company has spent $200,000.00 in remodelling their cold storage plant, providing a covered shed for loading cars and vehicles, and renovating their offal disposal plant. Another firm has now had their Dry-Rendering Plant in operation for over a year and speak very highly of the results. If other plants installed this process, I believe it would result in diminishing the complaints received of odors from fertilizer plants. The process, briefly, is to cut the product into as small pieces as possible and drain off the

surplus moisture. The cooking is done by a steam heated chamber, at 60 lb. pressure, surrounding the tank proper. The latest method is to cook the product in the inner tank with the pressure due to the steam generated from the moisture in the product itself. This prevents scorching and thoroughly disintegrates the product. The advantages of Dry-Rendering, from a sanitary standpoint, are:

The dried product being in cakes is more easily handled and the nuisance of dust when loading cars is abated.

To get the best results the product must be handled quickly which lessens the possibility of the fresh product being held.

The probabilities of objectionable odors which sometimes accompany the "blowing" out of the tanks, or decomposing tankage water, are also diminished.

## Bakeries

There was an increase of 7 in the number of small bakeries. There seems to be an increasing demand for so-called "Home-made" bread and pastries. These bakeries and retail stores are generally combined, doing away with the cost of delivery. In contrast to the practice in most large cities of the United States, where bread is only delivered to the stores, the large bakeries in Winnipeg deliver direct to the consumer.

## Butcher Shops

These decreased by 6. Some of the shops which start up in the Fall when beef is cheap, and owing to the climatic conditions are able to operate with a minimum of equipment, were this year not apparent, probably owing to the high price obtaining for beef cattle.

## Condemnations

Owing to the exceptionally wet Spring, the amount of country dressed produce was considerably curtailed, but the latter months of the year more than made up for this by the amount of poultry marketed locally. This influx was due to the low price prevailing in those outside markets which generally absorb our surplus.

One feature of the large condemnations was the amount of Tubercular poultry; approximately 14 per cent of the birds condemned in December being affected and this was confined to those in which the disease was sufficiently advanced to indicate its presence in the physical appearance of the dead bird. A great many of these came from country points in fairly isolated districts.

## Confectioners and Ice Cream Parlors

These decreased in number; in some measure due to the curtailed business incidental to the unusual weather condition obtaining last Summer.

## Flies

Last Winter we insisted that Bakeries and Restaurants, where flies were at all apparent, should keep fly papers renewed all the time. This idea was met with certain amount of scepticism at the idea of catching flies in Winter. When, however, it was tried and the amount of flies seen on the papers, the owners were generally impressed with the idea. We are more and more convinced that, given the right conditions, flies breed quite readily in Winter. One bakery which used to put up a dozen fly papers every Monday morning were still catching an average of 30 per paper, per week, in March. We had the machinery moved and everything we could think of thoroughly cleaned, but under the floor or some other undiscovered source the flies still persisted.

Our efforts were rewarded though in the Summer months. In spite of a Summer without precedent for moisture and muggy weather, conditions suitable for fly propagation, it was refreshing to hear people remark on the absence of flies; several remarking in July that they had not seen a house-fly all Summer. About August the flies seemed to increase, but this increase in some cases proved to be mistaken identity. In one instance, where flies seemed especially prevalent in a restaurant, we investigated the cause as other restaurants seemed conspicuously free. In this case we found that the flies were coming from a hide house in the vicinity. The soil in the lane outside these premises, to a depth of 4 inches, was simply alive with larvae. We developed a number of these over a period of five weeks and found they were the Sheep Pelt fly. The Sanitary Division took steps to abate the number in the lane and the nuisance subsided.

We feel convinced that in a climate like this, where conditions are such that a fly cannot exist outside the buildings for six months in the year, that it is possible, by taking steps in Winter to eliminate flies in warm locations, to limit their number to a large extent. We shall never be quite without them unless the precautions indicated are taken in outlying districts, as it has been definitely established in recent experiments that flies travel as much as 11 miles in 4 to 7 days.

## Grocery Stores

There has been an increase in the number of grocery stores from 220 to 241. An immense improvement is noticeable in the appearance of the modern grocery store. The old hollow counter, which formerly served as a receptacle for odds and ends, is being removed and only sufficient left to act as a table for wrapping parcels. This enlarges the appearance of the store and furnishes less scope for rubbish to collect. No stock is allowed on the floor, the shelves are raised up so that no place is left for mice and rats to harbour, and the higher shelves are cut down, making the goods easier of access. These improvements limit the amount of stock, resulting in fresher appearing goods. Altogether, with the wide variety of color on the labels and keeping walls painted, the stores present a very attaractive appearance.

## Poultry Slaughter Houses

These decreased fifty per cent, partially due to the practice of people dressing their own fowl and selling to organizations like the Co-operative Pool, and also to the outbreak of an infectious disease among the live poultry which necessitated curtailing the feeding operations. The virulent type of the disease resulted in severe losses to some of the feeders.

## Prosecutions

The prosecutions for this year were confined to five.

The reasons for prosecution were:

| | |
|---|---|
| Neglecting to keep premises in a clean and satisfactory condition | 3 |
| Selling fruit unfit for food | 2 |
| Total | 5 |

Generally speaking we find storekeepers anxious to co-operate, but there will always be some who, in spite of orders and warnings, persist in disregarding advice.

## Restaurants and Victualling Houses

Under the License By-law, all places where food, solid or liquid, is consumed on the premises, are licensed under the Victualling License. There were 497 of these licensed by the License Inspector last year, bringing in approximately $15,000.00.

Before the license is issued a permit must be secured from the Health Department that the building and equipment is suitable for that purpose. In issuing the permit we designate on the permit whether the premises are suitable for a Restaurant, that is—provided with hood on the stoves, hot running water, etc., or only equipped to take care of intermittent business such as ice cream or soft drinks in Summer when, in lieu of a supply of hot water, only individual cups or straws are permitted.

## Sterilization of Eating Utensils

Though there are few authentic cases on record of disease being traced to eating utensils, authorities from time to time have indicated the possibility of the dangers arising from utensils which have been used, contaminated with organisms and improperly sterilized before further use. They claim these organisms may become more virulent with a change of host or that they may be imbibed by persons with lowered resistant powers.

The mouth and throat harbour a multitude of bacteria. The number of conditions which are rectified by the removal of diseased teeth and tonsils bear witness to the dangers which exist.

Any normal or abnormal inhabitant of the mouth may be deposited in secretions left on eating utensils which touch the mouth. The Provincial Board of Health, recognizing these facts, some years ago passed a Regulation requiring Restaurants to have an ample supply of hot running water or a sterilizing solution satisfactory to the Health Officer. Recently the use of a sterilizing solution, Sodium Hypochlorite, has been largely practiced in bottling plants and, with a view of ascertaining whether this agent was effective under ordinary conditions obtaining in restaurants, we this Summer conducted a number of tests.

We were also interested in seeing whether the ordinary methods of washing dishes in these eating places was effective in disposing of oranisms which we were led to believe were present in large numbers.

The practice was for the Inspector to provide himself with a bottle of Hypochlorite containing 10 per cent available Chlorine. We kept this solution tightly corked and in a dark place. He then procured three sterile 8 oz. bottles, one of which was filled with sterile water. Proceeding to a Restaurant at a time when the dishes were being washed, he first obtained the temperature of the tap water and also of the water in which the dishes were being washed. He then took a sample of the dish water in one of the sterile bottles. Chlorine solution was added to the water in the sink at the rate of a tablespoonful to every 2 gallons of water. After stirring up another sample was taken. He then procured 6 cups or glasses as the case might be, selecting any which showed signs of chips or cracks. In one of these he poured the sterile water, rotated the cup or glass so as to wash up to the edge of the vessel and poured into another of the cups. The process was repeated until all six cups or glasses had been rinsed; the solution was then poured back into the bottle. We also tried Chlorine Powder but decided it was not as stable as the liquid solution.

## TEST OF BACTERIAL CONTAMINATION IN DISH WATER AND EFFECTS OF HYPOCHLORITE SOLUTION AS A STERILIZING AGENT ON THE SAME

| | Temp. tap water at start of washing | Temp. when sample taken | Wash water | No. 1 Chlor-inated | Rinse water from cups or glasses |
|---|---|---|---|---|---|
| | | | I | II | III |
| | | | Bact. per c.c. | Bact. per c.c. | Bact. per c.c. |
| 1 | 170 | 110 | 200,000 | 280 | 50 |
| 2 | 180 | 100 | 13,000 | No growth | 2 |
| 3 | 110 | 80 | 16,000 | No growth | 1 |
| 4 | 175 | 110 | Spoilt | No growth | Spoilt |
| 5 | 125 | 100 | 10,000 | 8 | 16 |
| 6 | 130 | 90 | 70,000 | 3 | 5 |
| 7 | 150 | 105 | 53,000 | No growth | 18 |
| 8* | 130 | 90 | 100,000 | Spoilt | 169 |
| 9* | 140 | 100 | 23,000 | 400* | 57* |
| 10* | 120 | 85 | 13,000 | 2,000* | 500* |
| 11* | 120 | 90 | 146,000 | 6,000* | 770* |
| 12* | 125 | 100 | 12,000 | 100* | 30* |
| 13* | 120 | 90 | 4,000 | No growth | 1,000* |
| 14* | 120 | 80 | Innumerable | Innumerable | Innumerable |
| 15* | 160 | 120 | 4,000 | 200* | No growth |
| 16* | 120 | 90 | Innumerable | 200* | 4* |
| 17 | 145 | 110 | 7,000 | No growth | 13* |

*No. 8—Cracked cups.

*No. 9-10—Chlorine Powder (glasses).

*No. 11—Soap chips (chipped cups).

*No. 12—Soap chips.

*No. 13—Glasses.

*No. 14—This water had been standing for some time with soap chips freely used and the Chlorine Solution, after being in use for 5 months, had lost its potency.

*No. 15—Some soap used, also new bottle of Chlorine mixture.

*No. 16—Soap used.—Glasses.

### Conclusions

Hot water, changed at frequent intervals, rendered reasonably sterile earthenware which was free from chips and cracks.

Dishes washed in greasy or soapy water retained organisms.

Chipped and cracked dishes retained numbers of organisms and their use should be prohibited.

Glasses for some reason invariably showed growths of bacteria. Whether this was due to fear of a very hot solution cracking glasses, the nature of the contents, or other reason, we did not discover, as the

glasses appeared physically clean. At any rate glasses require special attention in washing.

A 10 per cent Chlorine solution, used so as to give 150 to 200 parts per million of available Chlorine, proved an effective sterilizing agent in solutions free from greasy matter and its use is indicated under conditions, such as circuses, when the supply of hot water is not constant.

## Staff

Once more I wish to acknowledge the willing co-operation of the small but efficient staff, consisting of Inspectors Foote and Mines.

Respectfully submitted,

ARTHUR RIGBY,

Chief Food Inspector.

## PREMISES UNDER INSPECTION AND IMPROVEMENTS MADE

| DESCRIPTION | Number Under Inspection | New Modern | Cement Floors | Renovated | New Plumbing | Remodelled |
|---|---|---|---|---|---|---|
| Abattoirs | 3 | .... | .... | .... | .... | .... |
| Auction Rooms | 1 | .... | .... | .... | .... | .... |
| Bakeries | 78 | 4 | .... | 33 | 2 | 3 |
| Bars | 2 | .... | .... | .... | .... | .... |
| Biscuit and Cereal Factories | 4 | .... | .... | 1 | .... | .... |
| Bottling Plants | 16 | 3 | .... | 2 | .... | .... |
| Breweries | 4 | .... | .... | 2 | .... | .... |
| Butcher Shops | 201 | 8 | .... | 34 | 3 | 7 |
| Butter Rooms | 2 | .... | .... | .... | .... | .... |
| Candy Factories | 20 | .... | .... | 7 | .... | 1 |
| Canning Factories | 1 | .... | .... | .... | .... | .... |
| Cold Storage Plants | 5 | .... | .... | 1 | .... | 1 |
| Commission and Produce Houses | 74 | 6 | .... | 8 | .... | .... |
| Confectioners and Ice Cream Parlors | 313 | 15 | .... | 72 | 5 | 11 |
| Delicatessen Shops | 2 | .... | .... | .... | .... | .... |
| Fish Shops | 15 | .... | .... | 2 | .... | .... |
| Fruit Houses (Wholesale) | 32 | 1 | .... | 3 | .... | .... |
| General Stores (Food) | 403 | 14 | .... | 26 | 1 | 5 |
| Groceries (Retail) | 241 | 7 | .... | 52 | 2 | 7 |
| Groceries (Wholesale) | 28 | 1 | .... | 3 | .... | .... |
| Hawker Vehicles | 129 | .... | .... | 75 | .... | .... |
| Hotel Kitchens | 44 | .... | .... | 17 | .... | 3 |
| Jam, Pickle and Vinegar Factories | 7 | 1 | 1 | 1 | .... | .... |
| Markets | 2 | .... | .... | .... | .... | .... |
| Packing Plants | 4 | 1 | .... | 1 | .... | .... |
| Peanut Butter Factories | 1 | .... | .... | .... | .... | .... |
| Poultry Slaughter Houses | 4 | .... | .... | 4 | .... | .... |
| Restaurants | 249 | 19 | 1 | 171 | 6 | 24 |
| Railway and Express Companies | 3 | .... | .... | .... | .... | .... |
| Sausage Factories | 16 | 2 | .... | 6 | .... | .... |
| Tea, Coffee and Spice Houses | 4 | .... | .... | .... | .... | .... |
| Yeast Factories | 1 | .... | .... | .... | .... | .... |
| Totals | 1909 | 82 | 2 | 521 | 19 | 62 |

## FOOD CONDEMNATIONS—1927

| DESCRIPTION | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Veal | 56 | 385 | 999 | 2,000 | 1,025 | 3,566 | 2,085 | ..... | 653 | 280 | ..... | ..... | 11,049 |
| Pork | ..... | ..... | 298 | 170 | ..... | 494 | ..... | ..... | ..... | ..... | ..... | ..... | 962 |
| Mutton | ..... | ..... | ..... | ..... | ..... | 95 | 152 | ..... | ..... | ..... | ..... | ..... | 247 |
| Poultry | 992 | 114½ | 157 | 102 | 46½ | 135 | 312 | 753 | 340 | 427½ | 2,904½ | 7,341½ | 13,625½ |
| Fish | ..... | ..... | 50 | ..... | 100 | ..... | ..... | 3,718 | 125 | ..... | ..... | ..... | 3,993 |
| Dried Fruit | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 50 | 50 |
| Jam | ..... | ..... | ..... | ..... | 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 25 |
| Candy | 200 | ..... | 9 | 100 | 80 | ..... | ..... | ..... | ..... | ..... | 135 | ..... | 524 |
| Canned Goods | ..... | ..... | ..... | 40 | ..... | 1,800 | 300 | 150 | ..... | ..... | ..... | ..... | 2,290 |
| Cereals | 150 | 103 | 196 | 1,000 | 270 | ..... | ..... | 130 | 2,500 | ..... | 50 | ..... | 4,399 |
| Nuts | ..... | ..... | 60 | ..... | 50 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 110 |
| Coffee | ..... | 25 | 90 | ..... | ..... | 427 | ..... | ..... | ..... | ..... | ..... | ..... | 542 |
| Game (Rabbits) | ..... | 50 | 50 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 100 |
| Tea | 4,500 | 40 | 120 | ..... | 3,660 | ..... | 730 | ..... | ..... | ..... | ..... | ..... | 9,050 |
| Miscellaneous (Extracts) | ..... | ..... | ..... | ..... | 70 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 70 |
| Sugar | 100 | 706 | ..... | 100 | ..... | 220 | 100 | 100 | 100 | 100 | 545 | ..... | 2,071 |
| Totals | 5,998 | 1,423½ | 2,029 | 3,512 | 5,326½ | 6,737 | 3,679 | 4,851 | 3,718 | 807½ | 3,634½ | 7,391½ | 49,107½ |

## FOOD INSPECTIONS—1927

| PREMISES | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abattoirs and Packers | 13 | 15 | 12 | 15 | 13 | 12 | 21 | 26 | 23 | 22 | 26 | 28 | 226 |
| Bakeries | 89 | 80 | 68 | 73 | 64 | 70 | 70 | 97 | 78 | 80 | 80 | 67 | 916 |
| Bakery Vehicles | 46 | 40 | 51 | 29 | 33 | 31 | 34 | 45 | 38 | 36 | 30 | 33 | 446 |
| Biscuit and Cereal Factories | 6 | 7 | 7 | 7 | 6 | 7 | 6 | 4 | 3 | 5 | 4 | 6 | 68 |
| Breweries | 13 | 11 | 13 | 13 | 11 | 16 | 11 | 16 | 16 | 15 | 14 | 13 | 162 |
| Butcher Shops | 175 | 148 | 191 | 181 | 167 | 172 | 123 | 174 | 166 | 170 | 179 | 154 | 2,000 |
| Butter and Cheese | 6 | 4 | 4 | 5 | 6 | 5 | 4 | 5 | 5 | 5 | 4 | 2 | 55 |
| Candy Factories | 36 | 27 | 27 | 30 | 27 | 26 | 14 | 23 | 23 | 25 | 24 | 29 | 311 |
| Cold Storage Plants | 11 | 6 | 7 | 5 | 5 | 7 | 5 | 8 | 5 | 5 | 6 | 9 | 79 |
| Fish Stores | 38 | 33 | 22 | 23 | 22 | 23 | 21 | 26 | 21 | 23 | 27 | 21 | 300 |
| Fruit Stores | 57 | 53 | 76 | 71 | 64 | 59 | 66 | 110 | 108 | 83 | 74 | 75 | 896 |
| General Stores | 364 | 231 | 401 | 361 | 331 | 319 | 234 | 383 | 361 | 400 | 406 | 350 | 4,141 |
| Grocers | 133 | 123 | 202 | 180 | 224 | 196 | 147 | 182 | 183 | 145 | 183 | 159 | 2,057 |
| Hawker's Vehicles | 114 | 123 | 134 | 125 | 135 | 153 | 96 | 169 | 146 | 153 | 126 | 134 | 1,608 |
| Hotel Kitchens | 27 | 45 | 19 | 16 | 23 | 21 | 6 | 20 | 19 | 15 | 13 | 15 | 239 |
| Ice Cream Parlors and Confectioners | 195 | 156 | 239 | 248 | 245 | 250 | 179 | 225 | 219 | 224 | 214 | 181 | 2,575 |
| Jam, Pickle and Spice Factories | 12 | 8 | 10 | 9 | 9 | 8 | 8 | 11 | 9 | 10 | 10 | 9 | 113 |
| Markets and Auction Rooms | 4 | 8 | 6 | 5 | 6 | 5 | 10 | 12 | 9 | 9 | 8 | 7 | 89 |
| Peanut Butter Factories | 1 | ..... | 1 | ..... | 1 | ..... | 1 | 1 | 1 | 1 | ..... | 1 | 8 |
| Poultry Slaughter Houses | 5 | 5 | 8 | 7 | 7 | 5 | 2 | 5 | 8 | 7 | 10 | 12 | 81 |
| Produce, Commission and Eggs | 67 | 51 | 62 | 48 | 56 | 46 | 52 | 49 | 82 | 54 | 59 | 64 | 690 |
| Railway Express | 3 | 5 | 6 | 6 | 6 | 7 | 4 | 6 | 5 | 4 | 5 | 11 | 68 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Restaurants and Lunch Counters | 281 | 279 | 270 | 275 | 309 | 295 | 218 | 339 | 344 | 338 | 328 | 316 | 3,592 |
| Sausage Factories | 21 | 19 | 22 | 14 | 30 | 22 | 19 | 18 | 15 | 18 | 19 | 21 | 238 |
| Special | 95 | 131 | 108 | 109 | 104 | 111 | 80 | 163 | 122 | 122 | 146 | 128 | 1,419 |
| Temperance Bars | 3 | 2 | 2 | 2 | 2 | 3 | ..... | 2 | 4 | 1 | 2 | 1 | 24 |
| Railway Cars | 2 | 3 | ..... | ..... | ..... | ..... | ..... | 24 | ..... | ..... | ..... | ..... | 29 |
| Totals | 1,817 | 1,613 | 1,968 | 1,857 | 1,906 | 1,869 | 1,431 | 2,143 | 2,013 | 1,970 | 1,997 | 1,846 | 22,430 |
| Notices to Improve Conditions | 89 | 90 | 142 | 38 | 100 | 123 | 58 | 128 | 119 | 111 | 62 | 92 | 1,352 |

## PROSECUTIONS

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Insanitary Premises | ..... | 1 | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 |
| Unsound Food | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | ..... | 2 |
| Exposing to Contamination | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| No Permits | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Amount of Fines and Costs | ..... | $3.00 | $18.00 | ..... | ..... | ..... | ..... | $13.00 | ..... | ..... | $11.00 | ..... | $45.00 |

# Bureau of Child Hygiene

A. J. Douglas, Esq., M.D.,
Medical Health Officer.

Dear Sir:

I have the honor to submit herewith the report of the Bureau of Child Hygiene for the year 1927.

## Lowest Infant Mortality Rate Recorded

It is gratifying to report that the infant mortality rate for 1927 was 61.2 deaths per 1,000 live births, or 9.4 points lower than the rate of 70.6 for 1926, and 6.6 points lower than the previous low record of 67.8 for 1924. See table on page 133.

The conspicuous feature in infant mortality during 1927 was the decided drop in the pneumonia peak characteristic of the spring months, the rate at the end of April being 66, against 90 for the corresponding months of 1926. The low mortality continued until the end of August, when the rate stood at 55, but an outbreak of diarrheal disease in September caused the rate to rise during the latter months of the year, giving us a final rate of 61.

## Stillbirths Increase

This low infant mortality rate is, however, discounted by an increase in stillbirths, the rate for the latter being 45.0 per 1,000 live births, against 35.1 for 1926 and an average of 40.6 for the past ten years. The present stillbirth rate is the second highest recorded, whilst the 1926 rate was the lowest. See table on page 128.

Under the present method of calculating infant mortality rates, i.e., excluding stillbirths from both births and deaths, an increase in the stillbirths such as occurred in 1927 is masked unless attention is directed to it and this appears to be an undesirable feature of the present system.

While infant mortality rates were ranging between 100 and 200 per 1,000 live births, stillbirths were of lesser importance, but now that the infant mortality rate is around 60 and the stillbirth rate is 45, the latter assumes a new prominence, especially when it is considered that out of the 273 infant deaths for 1927, 64 occurred within 24 hours after birth and that out of the 200 stillbirths registered in 1927, a large proportion occurred within 24 hours before birth.

A proposal has been made to divide stillbirths into ante-natal, intra-natal and post-natal classifications, but the information given on Winnipeg stillbirth certificates is at present insufficient to make such a classifica-

tion of value. This suggestion might well be taken up with the Provincial and Dominion Vital Statistics departments with a view to providing for this information on stillbirth certificates, as such records will require much further study than they now receive if as low rates as have been achieved in other communities are to be obtained in this city.

## Causes of Infant Deaths

**Diseases of early infancy,** as has been the case since 1917, were again the leading causes of death, 131 of 273 infant deaths being assigned to this group, giving a rate of 29.3 per 1,000 live births, as compared with a rate of 37.1 for 1926, which was about the average rate for the past five years. It is mainly due to this decided drop in mortality from diseases of early infancy that the 1927 rate is the lowest yet recorded. See tables on page 134.

**Deaths from Diseases of the Digestive System** numbered 40, against 33 for 1926, but the 1927 rate of 90 deaths per 1,000 live births from this cause is still one of our lowest rates. As previously mentioned, the increase was due to an outbreak of infectious diarrhea in September.

**Pneumonia and other respiratory diseases** caused 53 deaths, giving a rate of 11.9 per 1,000 live births. No improvement has taken place in this group since 1922, when the rate was 13.3. Eleven of the 53 deaths in 1927 from these causes occurred from May to November, the balance of 42 occurring in the six winter and spring months. The bulk of these deaths occur in districts where the gospel of fresh air is thoroughly disbelieved, and where houses are heated with stoves, causing an excessive range between the night and day temperatures of the rooms. This area comprises four sections bordering the C.P.R. main tracks, and here the mortality rate from respiratory diseases amongst infants is 33 per 1,000 live births, against an average rate of 9 for the remaining ten sections of the city.

To the remaining classification, **All Other Diseases,** were assigned 49 infant deaths, giving a rate of 11.0 per 1,000 live births, the lowest since 1921. The decrease was mainly due to fewer deaths from acute communicable diseases, there being nine of such deaths in 1927, five of which were due to whooping cough, against 16 for 1926. The nurses constantly warn mothers of the danger of exposing young children to infectious diseases and comparisons of our present rates from this cause with rates prevailing when infant welfare work was first inaugurated, show how effectively the advice has been followed.

The following table summarizes the infant deaths for 1927 and rates per 1,000 live births for 1927 and 1926. Further details are given on page 134.

| | 1927 | | 1926 |
|---|---|---|---|
| | Deaths | Rate | Rate |
| Diseases of early infancy | 131 | 29.3 | 37.1 |
| Diseases of respiratory system | 53 | 11.9 | 11.5 |
| Diseases of digestive system | 40 | 9.0 | 7.4 |
| All other diseases | 49 | 11.0 | 14.6 |
| | 273 | 61.2 | 70.6 |
| Stillbirths | 200 | 45.0 | 35.1 |

## Infant Mortality by Sections of City

The folowing table shows the number of stillbirths, live births and infant deaths in each section of the city in 1927, together with the mortality rates for infants under one year and under one month, per 100 live births in each section:

## INFANT MORTALITY ACCORDING TO SECTIONS OF CITY

| | | | | | | Infant Mortality Rates per 100 Live Births | |
|---|---|---|---|---|---|---|---|
| | | | Still-Births | Live Births | Infant Deaths | Under 1 yr. | Under 1 mth. |
| I | W | Fort Rouge, west of Pembina | 12 | 315 | 18 | 5.7 | 4.4 |
| I | E | Fort Rouge, east of Pembina | 13 | 169 | 12 | 7.1 | 3.5 |
| II | | Red River to Spence St. | 12 | 298 | 21 | 7.0 | 4.0 |
| III | S | Assiniboine River to Ellice Ave. | 23 | 437 | 20 | 4.6 | 2.7 |
| III | N | Ellice Ave. to Notre Dame Ave. | 16 | 364 | 29 | 8.0 | 4.4 |
| IV | W | Notre Dame to C.P.R. Tracks | 5 | 198 | 15 | 7.6 | 3.5 |
| IV | C | Sherbrook St. to Main St. | 12 | 229 | 25 | 10.9 | 6.1 |
| IV | E | Point Douglas, south of C.P.R. | 1 | 60 | 7 | 11.7 | 6.7 |
| V | E | Point Douglas, north of C.P.R. | 10 | 148 | 13 | 8.8 | 3.4 |
| V | S | C.P.R. Tracks to Selkirk Ave. | 14 | 198 | 18 | 9.1 | 3.5 |
| V | N | Pritchard Ave. to Burrows Ave. | 3 | 204 | 9 | 4.4 | 1.5 |
| VI | W | Burrows to Limits, W. of No. 500 | 7 | 241 | 9 | 3.7 | 1.7 |
| VI | E | Burrows to Limits, E. of No. 499 | 13 | 234 | 13 | 5.5 | 3.8 |
| VII | | Elmwood | 7 | 211 | 8 | 3.8 | 2.8 |
| City | | | 147 | 3,306 | 217 | 6.6 | 3.6 |
| Non-Residents | | | 53 | 1,157 | 56 | 4.6 | 2.2 |
| | | Gross Totals and Rates | 200 | 4,463 | 273 | 6.1 | 3.2 |

In addition, there were 15 stillbirths, 260 live births and 15 infant deaths registered in the adjoining City of St. Boniface, which rightly

belong to Winnipeg according to the home addresses of the mothers concerned. These registrations are not officially included with Winnipeg figures.

## Midwife Attendants

Midwives attended 189 live births, or 4.2% of the total live births. This figure shows a slight increase as compared with 1926, when the rate was 3.7%. See table on page 131.

## Hospitalization of Maternity Cases

The proportion of births in hospitals and maternity homes continued to increase in 1927, the percentage rising from 70.9 in 1926 to 73.0% in 1927. In 1917 the percentage was 36.3, and in 1912, 31.5.

## Infants Born Out of Wedlock

The number of these births was 351, or 7.5% of the total births (including stillbirths). This percentage has been steadily increasing since 1920, when there were 262 such births, giving a percentage of 4.1, the lowest recorded. This low rate was reached by a gradual decline from a high of 7.6% in 1912, the highest percentage so far recorded. The present rate merits attention as it is higher than normal and the mortality amongst such infants has been proven to be much higher than in infants born in wedlock. See table on page 132.

## Maternal Mortality

As this subject is now occupying much attention, and as it is several years since I reviewed it at length, the present time is opportune to make public some facts regarding this oft-times preventable cause of death.

From 1910 to 1927, there occurred in the city 565 deaths which were assigned to puerperal causes, giving an average rate of 6.0 per 1,000 live births. The year 1914 shows the highest mortality with a rate of 9.1, and 1921, the lowest, with a rate of 3.5. Since that year an increase has taken place almost annually, until the rate now stands at 5.6.

The figures by years are as follows:

## PUERPERAL DEATHS—1910-27

| Year | Live Births | Puerperal Deaths | Rate per 1M Live Births |
|---|---|---|---|
| 1910 | 3,890 | 24 | 6.2 |
| 1911 | 4,614 | 21 | 4.5 |
| 1912 | 5,041 | 35 | 6.9 |
| 1913 | 5,577 | 39 | 7.0 |
| **1914** | **5,789** | **53** | **9.1** |
| 1915 | 5,823 | 26 | 4.4 |
| 1916 | 5,980 | 41 | 6.8 |
| 1917 | 5,446 | 36 | 6.6 |
| 1918 | 5,621 | 35 | 6.2 |
| 1919 | 5,254 | 28 | 5.3 |
| 1920 | 6,174 | 54 | 8.7 |
| **1921** | **6,029** | **21** | **3.5** |
| 1922 | 5,629 | 25 | 4.4 |
| 1923 | 5,214 | 26 | 5.0 |
| 1924 | 4,762 | 26 | 5.4 |
| 1925 | 4,632 | 25 | 5.4 |
| 1926 | 4,444 | 25 | 5.4 |
| 1927 | 4,463 | 25 | 5.6 |
| 1910-27 | 94,382 | 565 | 6.0 |

### Mortality Higher Among Non-Residents

An important point to be considered is that Winnipeg is the hospital centre for a large area of surrounding country and that many expectant mothers enter city hospitals just prior to the birth of their child.

Excluding 1920, when there were 54 deaths from puerperal causes largely due to an outbreak of puerperal sepsis in a maternity home, there occurred in the city from 1921 to 1927, 27,478 live births to mothers resident in Winnipeg and 7,679 live births to mothers from outside points. During the same seven years there were 115 and 58 deaths from puerperal causes in these two groups respectively, giving average mortality rates per 1,000 live births of 4.2 for city mothers, and 7.5 for non-resident mothers, the extremes for the latter being 4.5 and 10.3. By years these mortality rates are as follows:

## PUERPERAL DEATH RATES PER 1,000 LIVE BIRTHS

| | Residents | Non-Residents |
|---|---|---|
| 1921 | 2.6 | 7.5 |
| 1922 | 4.4 | 4.5 |
| 1923 | 4.3 | 7.5 |
| 1924 | 4.0 | 10.3 |
| 1925 | 5.3 | 5.6 |

**Puerperal Death Rates Per 1,000 Live Births**—Continued

| | Residents | Non-Residents |
|---|---|---|
| 1926 | 4.5 | 8.7 |
| 1927 | 4.5 | 8.6 |
| Average | 4.2 | 7.5 |

This classification throws an entirely new light upon local puerperal mortality and appears to contradict the statement of the Dominion Bureau of the Census, quoted on page 58 of the pamphlet "Maternal Mortality in Canada," which gives the urban rate in Manitoba for 1922 as 7.0, and the rural rate as 4.4. In this year, the rural rate is shown as considerably lower than the urban in every province, and a note is made that in England and Wales the reverse is true.

It is possible that the Bureau of the Census has based its figures upon the Place of Registration rather than upon the Residence of the Mother, thus exaggerating the puerperal mortality rates of the urban areas which serve as hospital centres to the surrounding rural districts and receive difficult maternity cases which often result in death, and lowering the rural rate. Rural expectant mothers have not the facilities for frequent examination available to urban mothers and we would naturally expect the puerperal death amongst the former to be the higher.

The city puerperal mortality rate of 4.2 is, of course, higher than is desirable, but a further analysis of the 115 puerperal deaths shows that many followed induced or self-induced abortions, and these cannot be charged against poor obstetrical technique or lack of pre-natal care. It would appear that a further division of the causes of death classified under The Puerperal State is necessary before the responsibility for Canada's high rate can be stated to be the result of any particular condition.

If medical death certificates on such cases definitely stated that death followed an abortion, miscarriage, stillbirth, or live birth, with other comment when necessary, such information would greatly assist in preparing accurate statistics, without which a campaign against puerperal mortality can be effective only by wasteful hit or miss methods. A truer knowledge of the facts will provide a basis for efficient organization and direction of the preventive work necessary to reduce our high puerperal mortality rate and this knowledge can be secured with less labor than is at present necessary by asking a few additional questions, to apply to deaths of women of child-bearing age, on the certificate of death, and by requiring each registrar to cross-check the births registered with the death registrations of such women.

The following is a detailed statement of Winnipeg puerperal mortality according to residence of the mother:

## PUERPERAL MORTALITY BY RESIDENTS and NON-RESIDENTS

| | Winnipeg Residents | | | Non-Residents | | |
|---|---|---|---|---|---|---|
| Year | Live Births | Puerperal Deaths | Rate per 1M Live Births | Live Births | Puerperal Deaths | Rate per 1M Live Births |
| 1921 | 4,969 | 13 | 2.6 | 1,060 | 8 | 7.5 |
| 1922 | 4,503 | 20 | 4.4 | 1,110 | 5 | 4.5 |
| 1923 | 4,146 | 18 | 4.3 | 1,068 | 8 | 7.5 |
| 1924 | 3,699 | 15 | 4.0 | 1,063 | 11 | 10.3 |
| 1925 | 3,560 | 19 | 5.3 | 1,072 | 6 | 5.6 |
| 1926 | 3,295 | 15 | 4.5 | 1,149 | 10 | 8.7 |
| 1927 | 3,306 | 15 | 4.5 | 1,157 | 10 | 8.6 |
| | 27,478 | 115 | 4.2 | 7,679 | 58 | 7.5 |

The nurses, whenever consulted by expectant mothers, advise them to place themselves early under the care of their family physician, or to attend the pre-natal clinic of the Winnipeg General Hospital if they cannot afford a private physician. Pre-natal advice was given by the nurses in 622 instances in 1927, but this number touches but the fringe of the work that should be done.

Our nurses come in contact with mothers only after the birth of the first, or even later, live infant, so that they can make no suggestions to women about to become mothers for the first time, a group which gave to birth 34% of the city births in 1927. This means that there were 1,110 first-born live infants born to resident mothers in 1927, and there is at present little effort made to reach them and advise that they consult their physician as early as possible. Certain communities have tackled this problem by mailing literature to every bride three months after registration of the marriage, but just what effect this procedure has had upon maternal mortality and the deaths of infants through diseases of early infancy, I do not know. In view of our high rates from these causes of death, the system should merit a trial.

### Babies' Clinic

Four hundred and thirty-one new cases attended the clinic in 1927, against 425 in 1926. By sections, the distribution was as follows:

| District | I | | II. | III. | | IV. | | | V. | | | VI. | | VII. | City | Non- | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Section | W. | E. | | S. | N. | W. | C. | E. | E. | S. | N. | W. | E. | | | Res. | Total |
| 1927 ..... | 18 | 19 | 33 | 36 | 33 | 21 | 38 | 5 | 22 | 50 | 38 | 32 | 45 | 33 | 423 | 8 | 431 |
| 1926 ..... | 14 | 14 | 25 | 27 | 36 | 29 | 30 | 7 | 31 | 72 | 37 | 32 | 42 | 24 | 420 | 5 | 425 |

District V, the area between the C.P.R. tracks and Burrows Avenue contributed the largest number of cases as in previous years.

Doctors R. F. Rorke and F. G. Schwalm continued to act as attending physicians on alternate mornings. No charge is made for Clinic ser-

vice, but families which can afford a private physician are not encouraged to attend.

Attendance at the clinic totalled 5,141, against 4,664 for 1926. By months the attendance was:

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1927 ..... | 295 | 348 | 528 | 427 | 476 | 503 | 465 | 479 | 465 | 475 | 364 | 316 | 5,141 |
| 1926 ..... | 310 | 353 | 358 | 434 | 434 | 388 | 474 | 471 | 426 | 383 | 353 | 280 | 4,664 |

## Milk Dispensary

The total feedings prepared show a decrease as compared with 1926 because of the reduced amount of sickness prevalent amongst babies in 1927. Feedings prepared numbered 20,951 for clinic and private cases and 6,040 for the Children's Hospital, a total of 26,991, as compared with 27,885 for 1926.

Free clinic feedings numbered 10,824 against 12,108 for 1926. Cash collected amounted to $1,555.19 for clinic and private feedings and the sum of $1,253.13 was charged the Children's Hospital for its feedings, making a total revenue of $2,808.32, or 10.4 cents per feeding. In 1917, the average amount collected for feedings was 4.8 cents, the difference being brought about by the present policy of requiring families to pay even a small daily amount for their feedings if they cannot afford to run a monthly charge account. In this way the families are encouraged to preserve their independence and pride as much as possible, yet no hardship is imposed upon indigent families.

## Child Welfare Nurses

The total number of visits made by the thirteen visiting nurses were 43,296 to babies and 182 to infants' boarding houses. The number of new cases visited was 2,752 or 83% of the live births to resident mothers. The Registrar of St. Boniface has kindly permitted us to copy the registrations affecting Winnipeg residents and these cases are also visited by the nurses, though the births and deaths are excluded from our rates as St. Boniface registrations are tabulated separately by the Dominion Bureau of the Census.

Sickness was much less frequent in all sections, except during the September outbreak previously referred to.

The nurses of several sections have continued to give Little Mother's Classes to teen-age girls and regular "talks" to mothers in connection with various organizations, and the attendance has been very satisfactory and the results well worth the effort. In addition, special addresses on different phases of the work have been given on request, and nurses have attended clinics held in connection with the gatherings of various societies. Further particulars of the nurses' work are given on page 125.

Nurse M. W. Macrae resigned in December, after seven years of excellent service, and was replaced by Nurse B. M. Bowles.

I desire to place on record my appreciation of the work of the staff of the nursing, dispensary, clinic and recording branches of the Bureau's work; all have given their best and shown most praise-worthy devotion to duty.

Respectfully submitted,

A. G. LAWRENCE,

Manager, Bureau of Child Hygiene.

## CASES ATTENDING CLINIC AND FEEDINGS PREPARED AT BABIES' MILK DEPOT, 1927

| | | | | | MILK DEPOT | | | | | | KIND OF FEEDING | | | | | | | SUPPLIES USED | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Attendance at Clinic | Cases Attending for First Time | Cases on Dispensary List at 1st of month (including Children's Hospital | Children's Hospital Feedings Prepared | Paid Feedings Prepared | Free Feedings Prepared | Total Feedings (excluding Children's Hospital) | Grand Total Feedings (including Children's Hospital) | Children's Hospital Debit Account | Dispensary Cash Collected | Lactic Acid | Protein | Sherry Whey | Casec | Albuminized | Acidified | Condensed Milk | Whole Milk (quarts) | Cream (quarts) | Skim Milk (quarts) | Powdered Sugar (lbs.) | Sugar of Milk (Lactose, lbs) | Barley Flour (lbs.) | Scotch Oatmeal (lbs.) | Dextri Maltose (lbs.) | Protein Powder (lbs.) | Corn Syrup (lbs.) | Evaporated Milk |
| Jan. | 295 | 29 | 76 | 742 | 783 | 782 | 1565 | 2307 | $ 127.78 | $ 120 70 | 136 | 49 | .... | ..... | .... | 229 | 20 | 1154 | 27½ | 662 | 7 | 21 | 23¼ | 7¾ | 15 | 3½ | 31 | ..... |
| Feb. | 348 | 33 | 71 | 613 | 742 | 752 | 1494 | 2107 | 112.29 | 112 05 | 140 | 80 | 5 | ..... | .... | 152 | 15 | 974 | 33¾ | 612 | 7 | 17 | 21¾ | 7 | 30 | 17½ | 41 | ..... |
| Mar. | 528 | 46 | 81 | 369 | 978 | 1163 | 2141 | 2510 | 71.48 | 110 05 | 229 | 50 | 31 | 20 | .... | 219 | ..... | 1242 | 44¼ | 686 | 8 | 13 | 24 | 11¾ | 55 | ..... | 51 | ..... |
| April | 427 | 42 | 80 | 375 | 926 | 1106 | 2032 | 2407 | 66 65 | 132.60 | 288 | 28 | .... | ..... | 51 | 216 | ..... | 2152 | 43 | 720 | 9 | 8 | 22½ | 15 | 32 | 10 | 60 | ..... |
| May | 476 | 43 | 70 | 281 | 1048 | 1001 | 2049 | 2330 | 66 03 | 146 95 | 173 | 97 | 10 | 174 | 3 | 187 | 24 | 936 | 46 | 824 | 5 | 4 | 22½ | 15½ | 53 | 19½ | 91 | ..... |
| June | 503 | 42 | 78 | 330 | 900 | 907 | 1807 | 2137 | 75.10 | 155.17 | 177 | 90 | .... | 152 | .... | 212 | ..... | 752 | 43¼ | 828 | 6 | 4 | 22½ | 15 | 25 | 22½ | 38 | ..... |
| July | 465 | 37 | 70 | 484 | 783 | 952 | 1735 | 2219 | 112.93 | 119.80 | 135 | 159 | .... | 130 | .... | 178 | ..... | 732 | 46 | 763 | 6 | 4 | 23½ | 15½ | 35 | 24½ | 62 | ..... |
| Aug. | 479 | 42 | 79 | 587 | 920 | 1000 | 1920 | 2507 | 106.43 | 165 45 | 307 | 100 | .... | 211 | .... | 118 | 2 | 1182 | 45¾ | 696 | 4 | 2 | 23¼ | 15½ | 40 | 19½ | 62 | ..... |
| Sept. | 465 | 36 | 71 | 743 | 892 | 858 | 1750 | 2493 | 161 40 | 137 65 | 483 | 185 | .... | 174 | .... | 243 | 4 | 998 | 36¾ | 908 | 9 | 6 | 26¾ | 15 | 35 | 58¾ | 90 | ..... |
| Oct. | 475 | 35 | 83 | 593 | 818 | 939 | 1757 | 2350 | 144 13 | 108 50 | 386 | 135 | .... | 177 | 19 | 195 | 3 | 1074 | 38 | 804 | 15 | 8 | 23¼ | 15½ | 25 | 23¾ | 87½ | 52 |
| Nov. | 364 | 24 | 62 | 438 | 678 | 689 | 1367 | 1805 | 111.63 | 146 42 | 226 | 144 | .... | 166 | 16 | 174 | ..... | 764 | 33½ | 644 | 15 | 4 | 16 | 15 | 40 | 20 | 90 | 97 |
| Dec. | 316 | 22 | 58 | 485 | 659 | 675 | 1334 | 1819 | 97.28 | 99 85 | 244 | 82 | .... | 89 | .... | 130 | 120 | 880 | 27½ | 676 | 15 | 3 | 15½ | 15½ | 30 | 13¾ | 66 | .... |
| Totals | 5141 | 431 | 879 | 6040 | 10127 | 10824 | 20951 | 26991 | $1253.13 | $1555.19 | 2924 | 1199 | 46 | 1293 | 89 | 2253 | 188 | 12840 | 463¼ | 8823 | 106 | 94 | 264¾ | 164 | 415 | 233¼ | 769½ | 149 |

## VISITS MADE BY CHILD WELFARE NURSES—1927

| | No. of Days on Duty | Total Live Births Visited | Deaths of Infants visited more than once | Visits to Babies | Visits to Infant's Homes | Calls to Sick Babies | Requested Calls | Cases Referred to Physicians | Cases Referred to Milk Depot | Cases Referred to Hospitals | Cases Referred to Social Welfare | Cases Referred to M.S.N.M. | Cases Sent to Fresh Air Camp | Pre-natal Advice given | Private Demonstrations | Treatments to Babies | Lectures given |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| January | 287½ | 224 | 13 | 3,509 | 15 | 321 | 194 | 52 | 29 | 17 | 2 | 1 | .... | 42 | 7 | 167 | 1 |
| February | 263½ | 199 | 7 | 3,350 | 24 | 332 | 153 | 53 | 10 | 17 | 5 | 3 | .... | 42 | 6 | 213 | 12 |
| March | 309 | 258 | 7 | 4,078 | 15 | 235 | 132 | 41 | 30 | 21 | 4 | 2 | .... | 53 | 5 | 214 | 1 |
| April | 282 | 269 | 4 | 3,742 | 15 | 128 | 91 | 28 | 24 | 15 | .... | 3 | .... | 57 | 13 | 143 | 2 |
| May | 294 | 231 | 3 | 3,860 | 14 | 82 | 95 | 47 | 25 | 11 | 3 | 5 | .... | 64 | 12 | 151 | 2 |
| June | 279 | 224 | 3 | 3,982 | 18 | 75 | 104 | 31 | 15 | 22 | 2 | 4 | 4 | 58 | 7 | 90 | .... |
| July | 218 | 234 | 2 | 2,937 | 9 | 87 | 87 | 17 | 18 | 5 | 3 | 2 | 5 | 43 | 12 | 88 | .... |
| August | 258½ | 254 | 1 | 3,352 | 13 | 76 | 95 | 23 | 15 | 8 | .... | 3 | 2 | 50 | 10 | 90 | 1 |
| Sept. | 278 | 218 | 10 | 3,794 | 20 | 81 | 77 | 34 | 21 | 15 | .... | 3 | .... | 56 | 7 | 74 | .... |
| October | 300 | 196 | 3 | 4,130 | 12 | 127 | 104 | 42 | 21 | 22 | .... | 2 | .... | 70 | 5 | 108 | 7 |
| November | 281 | 214 | 2 | 3,533 | 18 | 85 | 115 | 35 | 6 | 12 | .... | 5 | .... | 51 | 5 | 69 | 11 |
| December | 285½ | 232 | 3 | 3,029 | 9 | 71 | 127 | 22 | 11 | 14 | 1 | 2 | .... | 36 | 5 | 64 | 6 |
| Totals | 3336 | 2,753 | 58 | 43,296 | 182 | 1700 | 1374 | 425 | 225 | 179 | 20 | 35 | 11 | 622 | 94 | 1471 | 43 |

# Report on Vital Statistics

A. J. Douglas, Esq., M.D.,
Medical Health Officer.

Dear Sir:

I have the honour to submit herewith the report on Vital Statistics for the year 1927. As in previous years, copies of the birth and death registrations have been furnished the Department by courtesy of the Registrar, Mr. Magnus Peterson.

Respectfully submitted,
A. G. LAWRENCE,
Secretary.

## Summary of Vital Statistics

| | 1927 | 1926 |
|---|---|---|
| Area of City Land, 14,865 acres; water, 622 acres; total, 15,287 acres (23.9 square miles). | | |
| Population (City Assessor's figures) | 198,932 | 197,125 |
| Persons per acre of land | 13.38 | 13.26 |
| Natural increase, excess of births over deaths | 2,813 | 2,746 |
| Rate per 1,000 population | 14.14 | 13.93 |
| Stillbirths | 200 | 156 |
| Rate per 1,000 live births | 44.81 | 35.10 |
| Births, excluding stillbirths | 4,463 | 4,444 |
| Rate per 1,000 population | 22.44 | 22.54 |
| Deaths, excluding stillbirths | 1,650 | 1,698 |
| Rate per 1,000 population | 8.29 | 8.61 |
| Deaths of infants under 1 year | 273 | 314 |
| Infantile mortality rate per 1,000 living births | 61.17 | 70.65 |
| Marriages | 2,441 | 2,368 |
| Rate per 1,000 population | 12.27 | 12.01 |

## TYPHOID FEVER MORTALITY RATES PER 100,000 POPULATION, 1903-27

| 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1921 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 84.6 | 248.3 | 222.6 | 146.5 | 51.0 | 40.6 | 38.4 | 31.6 | 17.1 | 10.8 | 9.7 | 7.9 | 3.5 | 9.5 | 8.2 | 7.6 | 10.3 | 5.7 | 5.1 | 1.5 | 2.5 | 3.1 | 3.1 | 4.0 | 3.0 |
| Corrected Rate for City..... | | | | | | | | 7.9 | 5.4 | 4.3 | 3.9 | 2.0 | 7.5 | 6.0 | 6.5 | 7.4 | .0 | .0 | .0 | .5 | 1.0 | 1.0 | 1.0 | 1.5 |

## CRUDE MORTALITY RATES PER 100,000 POPULATION FOR LEADING CAUSES OF DEATH, 1911-27

| Year | Population | Tuberculosis of Lungs (31) | Tuberculosis other forms (32-37) | Cancer all forms (43-49) | Meningitis (71) | Cerebral Haemorrhage (74) | Diseases of the Heart (87-90) | Diseases of the Arteries (91) | Acute and Chronic Bronchitis (99) | Pneumonia all forms (100-101) | Appendicitis and Typhlitis (117) | Hernia, Intestinal Obstruction (118) | Acute and Chronic Nephritis (128-129) | Puerperal Deaths (143-150) | External Causes (165-203) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1927 | 198,932 | 37.2 | 9.5 | 102.5 | 5.0 | 38.1 | 112.6 | 10.1 | 5.5 | 75.5 | 16.1 | 11.1 | 30.7 | 12.6 | 57.8 |
| 1926 | 197,125 | 44.6 | 14.2 | 100.4 | 7.6 | 39.1 | 105.5 | 12.2 | 4.0 | 70.5 | 15.7 | 12.2 | 32.5 | 12.7 | 62.9 |
| 1925 | 195,148 | 41.5 | 11.8 | 95.3 | 7.2 | 41.5 | 84.0 | 9.7 | 7.2 | 68.1 | 20.0 | 9.2 | 33.8 | 12.8 | 57.9 |
| 1924 | 194,850 | 44.6 | 16.9 | 88.8 | 8.7 | 42.6 | 96.5 | 11.3 | 7.7 | 80.6 | 13.8 | 6.7 | 20.5 | 13.3 | 43.6 |
| 1923 | 199,300 | 48.2 | 16.0 | 82.3 | 6.0 | 28.6 | 87.8 | 13.5 | 5.5 | 77.3 | 9.5 | 9.5 | 28.6 | 13.0 | 52.2 |
| 1922 | 199,129 | 52.7 | 11.0 | 93.4 | 6.0 | 45.2 | 87.4 | 15.0 | 5.0 | 87.4 | 19.1 | 9.5 | 29.1 | 12.5 | 40.7 |
| 1921 | 196,947 | 50.8 | 26.4 | 87.3 | 8.1 | 32.0 | 91.9 | 15.7 | 4.6 | 84.8 | 14.2 | 4.6 | 18.3 | 10.7 | 46.7 |
| 1920 | 192,571 | 71.7 | 20.8 | 79.4 | 13.0 | 45.7 | 68.6 | 11.9 | 13.5 | 132.9 | 14.0 | 9.9 | 25.3 | 28.0 | 47.3 |
| 1919 | 183,378 | 72.0 | 24.5 | 73.1 | 10.9 | 30.5 | 72.0 | 9.8 | 18.0 | 105.2 | 17.4 | 13.6 | 33.3 | 15.3 | 57.2 |
| 1918 | 183,595 | 86.6 | 26.7 | 80.6 | 7.6 | 32.1 | 78.5 | 9.3 | 10.9 | 117.6 | 19.1 | 10.9 | 38.7 | 19.1 | 49.0 |
| 1917 | 182,848 | 74.4 | 24.1 | 62.4 | 14.2 | 24.6 | 72.2 | 19.7 | 13.7 | 114.8 | 14.2 | 4.9 | 31.2 | 19.7 | 41.0 |
| 1916 | 200,090 | 79.5 | 24.4 | 63.5 | 20.5 | 25.0 | 71.5 | 17.5 | 21.0 | 129.4 | 12.5 | 9.0 | 29.0 | 20.5 | 41.5 |
| 1915 | 201,981 | 79.2 | 16.8 | 48.5 | 17.3 | 20.8 | 59.9 | 15.3 | 21.8 | 91.1 | 13.4 | 11.4 | 28.2 | 12.9 | 52.9 |
| 1914 | 203,255 | 72 8 | 19.7 | 44.3 | 12.8 | 19.2 | 53.1 | 10.3 | 22.1 | 93.0 | 6.4 | 6.4 | 28.0 | 26.1 | 60.5 |
| 1913 | 184,730 | 71.4 | 26.0 | 51.4 | 21.6 | 21.6 | 68.2 | 11.9 | 13.0 | 109.9 | 10.3 | 8.7 | 35.7 | 21.1 | 68.2 |
| 1912 | 166,553 | 64.8 | 29.4 | 49.2 | 22.8 | 30.6 | 78.1 | 4.8 | 21.0 | 168.1 | 8.4 | 6.6 | 39.0 | 21.0 | 74.5 |
| 1911 | 151,958 | 71.0 | 27.7 | 46.7 | 18.4 | 19.1 | 65.2 | 4.6 | 13.8 | 138.2 | 9.2 | 9.9 | 36.8 | 13.8 | 62.5 |

## STILLBIRTHS, LIVE BIRTHS AND DEATHS, BY MONTH AND SEX, 1927

| 1927 | STILLBIRTHS | | | | LIVE BIRTHS | | | | DEATHS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month | Male | Female | 1927 Totals | 1926 Totals | Male | Female | 1927 Totals | 1926 Totals | Male | Female | 1927 Totals | 1926 Totals |
| January | 13 | 5 | 18 | 11 | 178 | 183 | 361 | 378 | 94 | 69 | 163 | 148 |
| February | 8 | 6 | 14 | 13 | 188 | 148 | 336 | 356 | 94 | 92 | 186 | 138 |
| March | 14 | 7 | 21 | 21 | 220 | 204 | 424 | 429 | 82 | 57 | 139 | 178 |
| April | 5 | 5 | 10 | 9 | 213 | 164 | 377 | 375 | 85 | 50 | 135 | 160 |
| May | 8 | 5 | 13 | 16 | 178 | 192 | 370 | 359 | 62 | 54 | 116 | 155 |
| June | 11 | 15 | 26 | 18 | 198 | 175 | 373 | 417 | 66 | 60 | 126 | 118 |
| July | 10 | 5 | 15 | 7 | 206 | 190 | 396 | 362 | 50 | 45 | 95 | 128 |
| August | 8 | 8 | 16 | 15 | 198 | 203 | 401 | 376 | 68 | 50 | 118 | 127 |
| September | 8 | 8 | 16 | 8 | 188 | 155 | 343 | 347 | 77 | 70 | 147 | 123 |
| October | 8 | 4 | 12 | 11 | 188 | 157 | 345 | 341 | 75 | 80 | 155 | 135 |
| November | 10 | 10 | 20 | 16 | 187 | 177 | 364 | 358 | 62 | 59 | 121 | 142 |
| December | 10 | 9 | 19 | 11 | 194 | 179 | 373 | 346 | 92 | 57 | 149 | 146 |
| Totals | 113 | 87 | 200 | 156 | 2,336 | 2,127 | 4,463 | 4,444 | 907 | 743 | 1,650 | 1,698 |

| Year | Population | Total Stillbirths | Rate per 1M Live Births | Total Live Births | Rate per 1M Population | Total Deaths | Rate per 1M Population |
|---|---|---|---|---|---|---|---|
| 1927 | 198,932 | 200 | 44.8 | 4,463 | 22.44 | 1,650 | 8.29 |
| 1926 | 197.125 | 156 | 35.1 | 4,444 | 22.[illegible]4 | 1,698 | 8.61 |
| 1925 | 195,148 | 188 | 40.6 | 4,632 | 23.73 | 1,619 | 8.30 |
| 1924 | 194,850 | 223 | 46.8 | 4,762 | 24.44 | 1,544 | 7.78 |
| 1923 | 199,300 | 211 | 40.5 | 5,214 | 26.16 | 1,698 | 8.52 |
| 1922 | 199,129 | 252 | 44.8 | 5,629 | 28.27 | 1,801 | 9.04 |
| 1921 | 196,947 | 238 | 39.5 | 6,029 | 30.61 | 1,721 | 8.74 |
| 1920 | 192,571 | 251 | 40.6 | 6,174 | 32.06 | 2,270 | 11.79 |
| 1919 | 183,378 | 206 | 39.2 | 5,254 | 28.65 | 2,108 | 11.49 |
| 1918 | 183,595 | 245 | 43.6 | 5,621 | 30.61 | 2,706 | 14.74 |
| 1917 | 182,848 | 192 | 35.2 | 5,446 | 29.79 | 1,728 | 9.45 |
| 1916 | 200,090 | 254 | 42.5 | 5,980 | 29.88 | 2,072 | 10.35 |
| 1915 | 201,981 | 225 | 38.6 | 5,823 | 28.82 | 1,763 | 8.73 |
| 1914 | 203,255 | 257 | 44.4 | 5,789 | 28.48 | 1,955 | 9.62 |
| 1913 | 184,730 | 240 | 43.0 | 5,577 | 30.2 | 2,204 | 11.9 |

## DEATHS BY MONTH, SEX AND AGE PERIOD, 1927

| | Under 1 | | 1 to 2 | | 3 to 4 | | 5 to 9 | | 10 to 19 | | 20 to 29 | | 30 to 39 | | 40 to 49 | | 50 to 59 | | 60 to 69 | | 70 to 79 | | 80 to 89 | | 90 to 99 | | Un-known | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. |
| January | 14 | 14 | 3 | 1 | 1 | .... | .... | 2 | 4 | 6 | 4 | 3 | 6 | 5 | 11 | 7 | 15 | 7 | 17 | 8 | 14 | 7 | 4 | 8 | 1 | 1 | .... | .... | 94 | 69 |
| February | 12 | 13 | 4 | 5 | 2 | 2 | 5 | 1 | 4 | 8 | 1 | 2 | 5 | 8 | 7 | 9 | 14 | 9 | 22 | 12 | 15 | 14 | 3 | 9 | .... | .... | .... | .... | 94 | 92 |
| March | 13 | 12 | 2 | .... | 2 | 1 | 3 | 2 | 3 | 3 | 4 | 4 | 12 | 6 | 8 | 4 | 7 | 6 | 9 | 8 | 16 | 9 | 3 | 1 | .... | 1 | .... | .... | 82 | 57 |
| April | 16 | 5 | 2 | 1 | .... | .... | 4 | .... | 5 | 3 | 5 | 6 | 4 | 8 | 8 | 5 | 8 | 5 | 11 | 8 | 17 | 4 | 4 | 5 | .... | .... | 1 | .... | 85 | 50 |
| May | 10 | 5 | 2 | 1 | 1 | .... | .... | 3 | 4 | 4 | 5 | 2 | 2 | 3 | 7 | 8 | 8 | 6 | 11 | 6 | 9 | 11 | 3 | 3 | .... | 2 | .... | .... | 62 | 54 |
| June | 10 | 11 | 4 | .... | 1 | 1 | 3 | .... | 3 | 2 | 2 | 4 | 3 | 6 | 9 | 7 | 5 | 11 | 12 | 5 | 12 | 12 | 2 | 1 | .... | .... | .... | .... | 66 | 60 |
| July | 7 | 5 | 3 | .... | 3 | .... | 4 | 2 | 2 | 1 | 3 | 4 | 2 | 6 | 8 | 4 | 4 | 4 | 8 | 6 | 4 | 11 | 2 | 2 | .... | .... | .... | .... | 50 | 45 |
| August | 13 | 8 | 2 | 1 | 2 | .... | 4 | 1 | 5 | 1 | 2 | 5 | 3 | 4 | 4 | 8 | 5 | 9 | 16 | 7 | 7 | 4 | 4 | 1 | 1 | 1 | .... | .... | 68 | 50 |
| September | 14 | 16 | 4 | 6 | 3 | 3 | 2 | .... | 6 | 5 | 6 | 3 | 7 | 4 | 9 | 7 | 6 | 3 | 11 | 5 | 7 | 16 | 2 | 2 | .... | .... | .... | .... | 77 | 70 |
| October | 14 | 10 | 4 | 2 | .... | 2 | 5 | 2 | 2 | 7 | 1 | 9 | 6 | 2 | 10 | 10 | 11 | 7 | 10 | 10 | 9 | 12 | 3 | 6 | .... | 1 | .... | .... | 75 | 80 |
| November | 13 | 13 | 3 | 1 | .... | .... | 2 | 3 | 2 | 1 | 3 | 5 | 3 | 3 | 7 | 9 | 6 | 6 | 14 | 5 | 6 | 11 | 3 | 2 | .... | .... | .... | .... | 62 | 59 |
| December | 17 | 8 | 2 | 3 | 1 | 2 | 1 | 3 | 3 | 1 | 4 | 5 | 10 | 6 | 17 | 5 | 10 | 7 | 10 | 8 | 13 | 4 | 2 | 5 | 2 | .... | .... | .... | 92 | 57 |
| Totals | 153 | 120 | 35 | 21 | 16 | 11 | 33 | 19 | 43 | 42 | 40 | 52 | 63 | 61 | 105 | 83 | 99 | 80 | 151 | 88 | 129 | 115 | 35 | 45 | 4 | 6 | 1 | .... | 907 | 743 |
| Combined Totals 1927 | 273 | | 56 | | 27 | | 52 | | 85 | | 92 | | 124 | | 188 | | 179 | | 239 | | 244 | | 80 | | 10 | | 1* | | 1,650 | |
| Totals 1926 | 314 | | 58 | | 27 | | 44 | | 69 | | 89 | | 147 | | 181 | | 213 | | 237 | | 206 | | 99 | | 13 | | 1** | | 1,698 | |
| Percentages of Totals 1927 | 16.55 | | 3.39 | | 1.64 | | 3.15 | | 5.15 | | 5.58 | | 7.51 | | 11.39 | | 10.85 | | 14.48 | | 14.79 | | 4.85 | | .61 | | .06 | | 100.0 | |
| Totals 1926 | 18.49 | | 3.42 | | 1.59 | | 2.59 | | 4.06 | | 5.24 | | 8.66 | | 10.66 | | 12.54 | | 13.96 | | 12.13 | | 5.83 | | .77 | | .06 | | 100.0 | |

*Unknown. **100 to 109 years.

## NATIVITY OF DECEDENTS, 1927

| | |
|---|---|
| Winnipeg | 404 |
| Manitoba (rest of) | 120 |
| Alberta | 1 |
| New Brunswick | 12 |
| Nova Scotia | 16 |
| Ontario | 233 |
| Prince Edward Island | 4 |
| Quebec | 30 |
| Saskatchewan | 18 |
| Canada | 21 |
| British Columbia | 3 |
| England and Wales | 229 |
| Orkney Island | 3 |
| Ireland | 62 |
| Scotland | 121 |
| India | 1 |
| Austria | 40 |
| Bukowenia | 1 |
| Galicia | 1 |
| Hungary | 3 |
| Poland | 67 |
| Serbia | 1 |
| Ukraine | 1 |
| Belgium | 2 |
| Denmark | 5 |
| Finland | 2 |
| France | 3 |
| Germany | 11 |
| Greece | 1 |
| Holland | 3 |
| Iceland | 24 |
| Italy | 5 |
| Norway | 7 |
| Roumania | 10 |
| Russia | 91 |
| Sweden | 16 |
| Switzerland | 2 |
| China | 4 |
| Syria | 1 |
| United States | 51 |
| Unknown | 20 |
| Total | 1,650 |

## SUMMARY

| | Deaths | | Per Cent. of Total | |
|---|---|---|---|---|
| | 1927 | 1926 | 1927 | 1926 |
| Canada | 862 | 899 | 52.3 | 53.0 |
| British Isles | 416 | 437 | 25.2 | 25.7 |
| Europe (excluding British Isles) | 296 | 277 | 17.9 | 16.3 |
| United States | 51 | 63 | 3.1 | 3.7 |
| Ocean | | 1 | | .1 |
| Asia | 5 | 7 | .3 | .4 |
| Other Countries | | 4 | | .2 |
| Unknown | 20 | 20 | 1.2 | .6 |
| Totals | 1,650 | 1,698 | 100.0 | 100.0 |

## SOCIAL STATUS OF DECEDENTS, 1927

| | Male | Female | Total | Per cent. of Total |
|---|---|---|---|---|
| Single, under 16 years | 265 | 202 | 467 | 28.2 |
| Single, 16 years and over | 133 | 55 | 188 | 11.4 |
| Total: Single | 398 | 257 | 655 | 39.6 |
| Married | 402 | 318 | 720 | 43.6 |
| Widowed | 94 | 167 | 261 | 15.9 |
| Divorced | 1 | .... | 1 | .1 |
| Unknown | 12 | 1 | 13 | .8 |
| | 907 | 743 | 1,650 | 100.0 |

## RATIO OF MALES TO 100 FEMALES, 1920-27

| | 1927 | 1926 | 1925 | 1924 | 1923 | 1922 | 1921 | 1920 |
|---|---|---|---|---|---|---|---|---|
| Stillbirths | 130 | 129 | 132 | 137 | 134 | 105 | 138 | 153 |
| Live Births | 110 | 110 | 108 | 100 | 106 | 103 | 107 | 106 |
| Deaths | 123 | 108 | 110 | 113 | 118 | 115 | 110 | 115 |

## PLURAL BIRTHS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Twin Births | 51 | 50 | 48 | 57 | 58 | 74 | 89 | 88 |
| Triple Births | .... | 1 | .... | .... | .... | 1 | .... | .... |

## ATTENDANT AT BIRTH

(Excluding Stillbirths—1924-27)

| | 1927 | | 1926 | 1925 | 1924 | 1920 |
|---|---|---|---|---|---|---|
| Physicians | 4,269 | 95.7% | 95.2% | 94.5% | 94.0% | 89.0% |
| Midwives | 189 | 4.3% | 3.8% | 5.5% | 6.0% | 11.0% |
| Unattended | 5 | | | | | |
| Unknown | .... | | | | | |

## INFANTS BORN OUT OF WEDLOCK, 1920-27

(Including Stillbirths)

| | 1927 | 1926 | 1925 | 1924 | 1923 | 1922 | 1921 | 1920 |
|---|---|---|---|---|---|---|---|---|
| Infants born out of Wedlock..... | 351 | 313 | 279 | 284 | 280 | 299 | 317 | 262 |
| Per Cent. of Total Births .... | 7.5 | 6.8 | 5.8 | 5.7 | 5.4 | 5.3 | 5.0 | 4.1 |

## STILLBIRTHS ACCORDING TO NATIONALITY OF MOTHERS, 1920-27

(Rates per 1,000 Live Births)

| | 1927 | 1926 | 1925 | 1924 | 1923 | 1922 | 1921 | 1920 |
|---|---|---|---|---|---|---|---|---|
| Canadian ..... | 38 | 27 | 34 | 46 | 40 | 37 | 48 | 45 |
| British ..... | 48 | 41 | 45 | 49 | 45 | 42 | 33 | 44 |
| Southern and Central European | 54 | 46 | 45 | 49 | 32 | 51 | 34 | 32 |

## INFANT MORTALITY, 1910-27

| | No. Births | No. Deaths | Rates per 1,000 Births |
|---|---|---|---|
| 1927 | 4,463 | 273 | 61.2 |
| 1926 | 4,444 | 314 | 70.6 |
| 1925 | 4,632 | 315 | 68.0 |
| 1924 | 4,762 | 323 | 67.8 |
| 1923 | 5,214 | 416 | 79.8 |
| 1922 | 5,629 | 500 | 88.8 |
| 1921 | 6,029 | 471 | 78.1 |
| 1920 | 6,174 | 625 | 101.2 |
| 1919 | 5,254 | 562 | 106.9 |
| 1918 | 5,621 | 516 | 91.8 |
| 1917 | 5,446 | 545 | 100.1 |
| 1916 | 5,980 | 700 | 117.0 |
| 1915 | 5,823 | 619 | 106.3 |
| 1914 | 5,789 | 729 | 125.9 |
| 1913 | 5,577 | 947 | 169.8 |
| 1912 | 4,870 | 1,006 | 206.6 |
| 1911 | 4,469 | 762 | 170.5 |
| 1910 | 3,772 | 628 | 166.5 |

## INFANT MORTALITY ACCORDING TO NATIONALITY OF MOTHERS, 1923-27

(Excluding Stillbirths)

| | 1927 | | Rates per 1,000 Live Births | | | | |
|---|---|---|---|---|---|---|---|
| Nationality | Live Births | Deaths | 1927 | 1926 | 1925 | 1924 | 1923 |
| Canadian | 1,838 | 117 | 64 | 78 | 59 | 62 | 74 |
| English and Welsh | 754 | 39 | 52 | 56 | 70 | 65 | 81 |
| Irish | 139 | 9 | 65 | 58 | 54 | 86 | 40 |
| Scottish | 376 | 16 | 43 | 67 | 82 | 48 | 77 |
| American (U.S.A.) | 187 | 15 | 80 | 57 | 40 | 41 | 70 |
| Scandinavian | 89 | 5 | 56 | 59 | 70 | 66 | 81 |
| Southern and Central European | 1,055 | 65 | 62 | 75 | 65 | 78 | 87 |
| All Others | 25 | 7 | .... | .... | .... | .... | .... |

## INFANT MORTALITY—CAUSE OF DEATH

### Number of Deaths

| | 1927 | 1926 | 1912 |
|---|---|---|---|
| Acute Communicable Diseases | 9 | 16 | 28 |
| Other general diseases | 25 | 25 | 80 |
| Of nervous system and of organs of special sense | 7 | 15 | 78 |
| Of respiratory system | 53 | 51 | 147 |
| Of digestive system | 40 | 33 | 399 |
| Malformations and diseases of early infancy | 131 | 165 | 251 |
| All other diseases | 8 | 9 | 23 |
| | 273 | 314 | 1,006 |

### Rate per 1,000 Births

| | 1927 | 1926 | 1912 |
|---|---|---|---|
| Acute communicable diseases | 2.0 | 3.6 | 5.8 |
| Other general diseases | 5.6 | 5.6 | 16.4 |
| Of nervous system and of organs of special sense | 1.6 | 3.4 | 16.0 |
| Of respiratory system | 11.9 | 11.5 | 30.2 |
| Of digestive system | 9.0 | 7.4 | 81.9 |
| Malformations and diseases of early infancy | 29.3 | 37.1 | 51.6 |
| All other diseases | 1.8 | 2.0 | 4.7 |
| | 61.2 | 70.6 | 206.6 |

### Per Cent of Total

| | 1927 | 1926 | 1912 |
|---|---|---|---|
| Acute communicable diseases | 3.3 | 5.1 | 2.8 |
| Other general diseases | 9.2 | 8.0 | 7.9 |
| Of nervous system and of organs of special sense | 2.6 | 4.8 | 7.8 |
| Of respiratory system | 19.4 | 16.2 | 14.6 |
| Of digestive system | 14.6 | 10.5 | 39.6 |
| Malformations and diseases of early infancy | 48.0 | 52.5 | 25.0 |
| All other diseases | 2.9 | 2.9 | 2.3 |
| Totals | 100.0 | 100.0 | 100.0 |

## CLASSIFICATION OF AGES OF DECEDENTS UNDER ONE YEAR OF AGE

**1927**

| | No. of Deaths | Rate per 1,000 Births | Per Cent. of Total |
|---|---|---|---|
| Minutes to 1 week | 106 | 23.7 | 38.8 |
| Over 1 to 2 weeks | 20 | 4.5 | 7.3 |
| Over 2 to 3 weeks | 10 | 2.2 | 3.7 |
| Over 3 weeks to 1 month | 8 | 1.8 | 2.9 |
| Minutes to 1 month | 144 | 32.2 | 52.7 |
| Over 1 to 2 months | 22 | 4.9 | 8.1 |
| Over 2 to 3 months | 23 | 5.2 | 8.4 |
| Minutes to 3 months | 189 | 42.3 | 69.2 |
| Over 3 to 6 months | 36 | 8.1 | 13.2 |
| Over 6 to 9 months | 23 | 5.2 | 8.4 |
| Over 9 and under 12 months | 25 | 5.6 | 9.2 |
| | 273 | 61.2 | 100.0 |

For comparison with the above, the final figures for the years 1926 and 1912 are given below:

**1926**

| | No. of Deaths | Rate per 1,000 Births | Per Cent. of Total |
|---|---|---|---|
| Minutes to 3 months | 227 | 51.1 | 72.2 |
| Over 3 to 6 months | 42 | 9.4 | 13.4 |
| Over 6 to 9 months | 27 | 6.1 | 8.7 |
| Over 9 and under 12 months | 18 | 4.0 | 5.7 |
| | 314 | 70.6 | 100.0 |

**1912**

| | No. of Deaths | Rate per 1,000 Births | Per Cent. of Total |
|---|---|---|---|
| Minutes to 3 months | 630 | 129.4 | 62.6 |
| Over 3 to 6 months | 189 | 38.8 | 18.8 |
| Over 6 to 9 months | 125 | 25.7 | 12.4 |
| Over 9 and under 12 months | 62 | 12.7 | 6.2 |
| | 1,006 | 206.6 | 100.0 |

## INFANT MORTALITY STATISTICS

For further particulars regarding infantile mortality, see report of the Manager, Bureau of Child Hygiene, pages 116 to 125.

| 1927 CAUSES OF DEATH (By Sex and Age) | SEX | | AGE IN YEARS | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Under 1. | 1 to 2 | 3 to 4 | 5 to 9 | 10 to 19 | 20 to 29 | 30 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 to 89 | 90 to 99 | Unknown | Totals |
| **I.—Epidemic, Endemic, and Infectious Diseases** | | | | | | | | | | | | | | | | | |
| 1 Typhoid and Paratyphoid fever: | | | | | | | | | | | | | | | | | |
| (a) Typhoid fever | 5 | 1 | | | | | 2 | 1 | 3 | | | | | | | | 6 |
| (b) Paratyphoid fever | | 1 | | | | | | | | 1 | | | | | | | 1 |
| 7 Measles | 1 | 2 | | 3 | | | | | | | | | | | | | 3 |
| 8 Scarlet fever | 5 | 1 | 1 | 1 | 2 | | 2 | | | | | | | | | | 6 |
| 9 Whooping-cough | 4 | 3 | 5 | 1 | | 1 | | | | | | | | | | | 7 |
| 10 Diphtheria | 20 | 14 | 1 | 4 | 7 | 16 | 5 | | | 1 | | | | | | | 34 |
| 11 Influenza: | | | | | | | | | | | | | | | | | |
| (a) With pulmonary complications specified | 10 | 8 | 1 | | | | | | | 6 | 3 | 4 | 2 | 2 | | | 18 |
| (b) Without pulmonary complications specified | 16 | 8 | 1 | 1 | | 2 | | | 1 | 2 | 4 | 3 | 7 | 3 | | | 24 |
| Totals, Nos. 1 to 11 | 61 | 38 | 9 | 10 | 9 | 19 | 9 | 1 | 4 | 10 | 7 | 7 | 9 | 5 | | | 99 |
| 16 Dysentery: | | | | | | | | | | | | | | | | | |
| (c) Unspecified or due to other causes | 1 | | | | | | | | | | 1 | | | | | | 1 |
| 21 Erysipelas | 3 | 4 | 4 | | | | | 1 | | | | | 1 | 1 | | | 7 |
| 22 Acute anterior poliomyelitis | 1 | | | | | 1 | | | | | | | | | | | 1 |
| 23 Lethargic encephalitis | 2 | 2 | | | | 1 | 1 | | 1 | 1 | | | | | | | 4 |
| 24 Meningococcus meningitis | 3 | 1 | 2 | 1 | | | 1 | | | | | | | | | | 4 |
| 29 Tetanus | 1 | | | 1 | | | | | | | | | | | | | 1 |
| 30 Mycoses | | 1 | | | | | | 1 | | | | | | | | | 1 |
| 31 Tuberculosis of the respiratory system | 41 | 33 | 1 | | | | 5 | 20 | 16 | 13 | 6 | 7 | 6 | | | | 74 |
| 32 Tuberculosis of the meninges and central nervous system | 7 | 2 | 2 | 2 | 1 | 2 | 2 | | | | | | | | | | 9 |
| 34 Tuberculosis of the vertebral column | 2 | | | | | | | 1 | | | | | 1 | | | | 2 |
| 35 Tuberculosis of the joints | 1 | | | | | | | | 1 | | | | | | | | 1 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 Tuberculosis of other organs: | | | | | | | | | | | | | | | | | |
| (b) Tuberculosis of bones (vertebral column excepted) | | 1 | | | | | | 1 | | | | | | | | | 1 |
| (c) Tuberculosis of lymphatic system (mesenteric and retroperitoneal glands excepted) | 1 | | 1 | | | | | | | | | | | | | | 1 |
| (e) Tuberculosis of organs other than the above | 1 | | | | | | | | 1 | | | | | | | | 1 |
| 37 Disseminated tuberculosis: | | | | | | | | | | | | | | | | | |
| (a) Acute | 2 | 1 | 2 | | | | 1 | | | | | | | | | | 3 |
| (b) Chronic or unspecified | 1 | | | | | | | 1 | | | | | | | | | 1 |
| Totals, Nos. 31 to 37 | 56 | 37 | 6 | 2 | 1 | 2 | 8 | 23 | 18 | 13 | 6 | 7 | 7 | | | | 93 |
| 38 Syphilis | 9 | 4 | 4 | | | | | | | 2 | 4 | 2 | 1 | | | | 13 |
| 40 Gonococcus infection | | 1 | | | | | | | 1 | | | | | | | | 1 |
| 41 Purulent infection, septicemia | 15 | 2 | 5 | | | 1 | 2 | 1 | 1 | 4 | 1 | 1 | | 1 | | | 17 |
| Totals, Class I | 152 | 90 | 30 | 14 | 10 | 24 | 21 | 27 | 25 | 30 | 19 | 17 | 18 | 7 | | | 242 |
| **II.—General Diseases Not Included in Class I.** | | | | | | | | | | | | | | | | | |
| 43 Cancer and other malignant tumors of the buccal cavity | 10 | 1 | | | | | | | 1 | 1 | 3 | 4 | 2 | | | | 11 |
| 44 Cancer and other malignant tumors of the stomach, liver | 42 | 23 | | | | | | | 2 | 7 | 12 | 19 | 22 | 3 | | | 65 |
| 45 Cancer and other malignant tumors of the peritoneum, intestines, rectum | 15 | 10 | | | | | | | 2 | 3 | 5 | 9 | 5 | 1 | | | 25 |
| 46 Cancer and other malignant tumors of the female genital organs | | 35 | | | | | | 3 | 5 | 8 | 13 | 5 | 1 | | | | 35 |
| 47 Cancer and other malignant tumors of the breast | | 15 | | | | | | | | 6 | 5 | 3 | | 1 | | | 15 |
| 48 Cancer and other malignant tumors of the skin | 1 | 2 | | | | | | | | 1 | | 1 | 1 | | | | 3 |
| 49 Cancer and other malignant tumors of other or unspecified organs | 33 | 17 | 1 | | 1 | | 3 | | 2 | 4 | 10 | 16 | 10 | 3 | | | 50 |
| Totals, Nos. 43 to 49 | 101 | 103 | 1 | | 1 | | 3 | 3 | 12 | 30 | 48 | 57 | 41 | 8 | | | 204 |
| 50 Benign tumors and tumors not returned as malignant (tumors of the female genital organs excepted) | | 3 | | | | | 1 | | | | | 1 | 1 | | | | 3 |
| 51 Acute rheumatic fever | 2 | 8 | | | | 1 | 3 | 2 | 1 | 1 | | 2 | | | | | 10 |
| 52 Chronic rheumatism, osteoarthritis, gout | | 2 | | | | | | | | | 1 | 1 | | | | | 2 |
| 56 Rickets | 1 | | | 1 | | | | | | | | | | | | | 1 |

| 1927 CAUSES OF DEATH (By Sex and Age) | SEX | | AGE IN YEARS | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Under 1 | 1 to 2 | 3 to 4 | 5 to 9 | 10 to 19 | 20 to 29 | 30 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 to 89 | 90 to 99 | Unknown | Totals |
| 57 Diabetes mellitus | 12 | 15 | | | | 1 | 1 | 1 | 2 | 4 | 4 | 10 | 4 | | | | 27 |
| 58 Anemia, cholorosis: | | | | | | | | | | | | | | | | | |
| (a) Pernicious Anemia | 4 | 2 | | | | | | | | 1 | 1 | 1 | 3 | | | | 6 |
| 60 Diseases of the thyroid gland: | | | | | | | | | | | | | | | | | |
| (a) Exophthalmic goiter | 1 | 7 | | | | | | 1 | 2 | | 4 | 1 | | | | | 8 |
| (b) Other diseases of the thyroid gland | 1 | 4 | 1 | | | | | | 1 | 3 | | | | | | | 5 |
| 61 Diseases of the parathyroid glands | | 1 | 1 | | | | | | | | | | | | | | 1 |
| 62 Diseases of the thymus gland | 1 | | | 1 | | | | | | | | | | | | | 1 |
| 63 Diseases of the adrenals (Addison's disease) | 1 | | | | | | | | | 1 | | | | | | | 1 |
| 65 Leukemia and Hodgkin's disease: | | | | | | | | | | | | | | | | | |
| (a) Leukemia | 3 | 2 | | | 1 | | 1 | | | | | 1 | 2 | | | | 5 |
| (b) Hodgkin's disease | 2 | | | | | | | | | | 2 | | | | | | 2 |
| 69 Other general diseases | 1 | 1 | 1 | 1 | | | | | | | | | | | | | 2 |
| Totals, Class II | 130 | 148 | 4 | 3 | 2 | 2 | 9 | 7 | 18 | 40 | 60 | 74 | 51 | 8 | | | 278 |
| **III.—Diseases of the Nervous System and of the Organs of Special Sense** | | | | | | | | | | | | | | | | | |
| 70 Encephalitis | 4 | 3 | 1 | | 1 | | 2 | 1 | | 2 | | | | | | | 7 |
| 71 Meningitis: | | | | | | | | | | | | | | | | | |
| *(a) Simple meningitis | 3 | 5 | 1 | 1 | | 2 | 1 | | 1 | | 1 | | 1 | | | | 8 |
| *(b) Nonepidemic cerebrospinal meningitis | 2 | | | 1 | | | | 1 | | | | | | | | | 2 |
| 72 Tabes dorsalis (locomotor ataxia) | 1 | | | | | | | | | 1 | | | | | | | 1 |
| 73 Other diseases of the spinal cord | 2 | 1 | | | | | | | | 1 | | | 2 | | | | 3 |
| 74 Cerebral hemorrhage, apoplexy: | | | | | | | | | | | | | | | | | |
| (a) Cerebral hemorrhage | 20 | 48 | | | 1 | | 1 | | 3 | 3 | 9 | 16 | 26 | 8 | 1 | | 68 |
| (b) Cerebral embolism and thrombosis | 5 | 3 | | | | | | | | 1 | 2 | 3 | 2 | | | | 8 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 Paralysis without specified cause: | | | | | | | | | | | | | | | | | |
| (a) Hemiplegia | 3 | 2 | | | | | | | | | | 2 | 3 | | | | 5 |
| (b) Others under this title | 1 | | | | | | | 1 | | | | | | | | | 1 |
| 76 General paralysis of the insane | 2 | | | | | | | | | 1 | 1 | | | | | | 2 |
| 77 Other forms of mental alienation | 2 | 1 | | | | | | | | 2 | | 1 | | | | | 3 |
| 80 Infantile convulsions (under 5 years of age) | 1 | 2 | 3 | | | | | | | | | | | | | | 3 |
| 83 Softening of the brain | | 1 | | | | | | | | 1 | | | | | | | 1 |
| 84 Other diseases of the nervous system | 8 | 7 | | 1 | | 1 | 4 | | 2 | 5 | 2 | | | | | | 15 |
| 86 Diseases of the ear and of the mastoid process: | | | | | | | | | | | | | | | | | |
| *(a) Diseases of the ear | 4 | 2 | 1 | | | | 1 | 1 | | 1 | | 2 | | | | | 6 |
| *(b) Diseases of the mastoid process | 4 | 2 | | 1 | | | 3 | 1 | 1 | | | | | | | | 6 |
| Totals, Class III | 62 | 77 | 6 | 4 | 2 | 3 | 12 | 5 | 7 | 18 | 15 | 24 | 34 | 8 | 1 | | 139 |
| **IV.—Diseases of the Circulatory System.** | | | | | | | | | | | | | | | | | |
| 87 Pericarditis | 1 | 1 | | | | | | | 1 | | | | 1 | | | | 2 |
| 88 Endocarditis and myocarditis (acute) | 3 | 7 | | | | 2 | 3 | | 3 | 1 | 1 | | | | | | 10 |
| 89 Angina pectoris | 14 | 5 | | | | | | | | 1 | 4 | 7 | 6 | 1 | | | 19 |
| 90 Other diseases of the heart | 108 | 85 | 1 | | | 2 | 7 | 5 | 5 | 21 | 28 | 41 | 57 | 21 | 5 | | 193 |
| 91 Diseases of the arteries: | | | | | | | | | | | | | | | | | |
| (a) Aneurysm | 1 | 3 | | | | | | | | 2 | 1 | | 1 | | | | 4 |
| (b) Arteriosclerosis | 5 | 10 | | | | | | | | 2 | 3 | 4 | 5 | 1 | | | 15 |
| (c) Other diseases of the arteries | 1 | | | | | | | | | | | 1 | | | | | 1 |
| 92 Embolism and thrombosis (not cerebral) | 17 | 4 | | | | | | | 1 | | 3 | 10 | 6 | 1 | | | 21 |
| Totals, Class IV | 150 | 115 | 1 | | | 4 | 10 | 5 | 10 | 27 | 40 | 63 | 76 | 24 | 5 | | 265 |
| **V.—Diseases of the Respiratory System.** | | | | | | | | | | | | | | | | | |
| 97 Diseases of the nasal fossae and their annexa: | | | | | | | | | | | | | | | | | |
| *(a) Diseases of the nasal fossae | | 1 | | 1 | | | | | | | | | | | | | 1 |
| 98 Diseases of the larynx | 2 | 1 | 1 | | | | | 1 | | | 1 | | | | | | 3 |
| 99 Bronchitis: | | | | | | | | | | | | | | | | | |
| (a) Acute | 2 | 1 | 1 | | | | | | | | | | 1 | | 1 | | 3 |
| (b) Chronic | 1 | 2 | | | | | | | | | 2 | | 1 | | | | 3 |
| (c) Unspecified (under 5 years of age) | | 1 | 1 | | | | | | | | | | | | | | 1 |
| (d) Unspecified (5 years and over) | 3 | 1 | | | | | | | | | | 1 | 1 | 2 | | | 4 |

| 1927 CAUSES OF DEATH (By Sex and Age) | SEX | | AGE IN YEARS | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Under 1 | 1 to 2 | 3 to 4 | 5 to 9 | 10 to 19 | 20 to 29 | 30 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 to 89 | 90 to 99 | Unknown | Totals |
| 100 Bronchopneumonia: | | | | | | | | | | | | | | | | | |
| *(a) Bronchopneumonia | 39 | 39 | 34 | 9 | 1 | | 3 | 1 | 2 | 2 | 3 | 8 | 7 | 7 | 1 | | 78 |
| 101 Pneumonia: | | | | | | | | | | | | | | | | | |
| (a) Lobar | 40 | 27 | 14 | 4 | 2 | 3 | 1 | 4 | 3 | 7 | 5 | 12 | 8 | 4 | | | 67 |
| (b) Unspecified | 4 | 2 | 1 | | | | | | | 1 | 1 | 2 | 1 | | | | 6 |
| 102 Pleurisy | 3 | 4 | 1 | | | | 1 | | 2 | 1 | | | 2 | | | | 7 |
| 103 Congestion and hemorrhagic infarct of the lung | 1 | 2 | | | | | | | 1 | | | 1 | 1 | | | | 3 |
| 105 Asthma | 1 | 2 | | | | | | | | 1 | | | 1 | 1 | | | 3 |
| 107 Other diseases of the respiratory system (T.B. excepted): | | | | | | | | | | | | | | | | | |
| (b) Diseases of the mediastinum | | 1 | | | | | | | | 1 | | | | | | | 1 |
| (c) Others under this title | 2 | | | | | | | 1 | | | | 1 | | | | | 2 |
| Totals, Class V. | 98 | 84 | 53 | 14 | 3 | 3 | 5 | 7 | 8 | 13 | 12 | 25 | 23 | 14 | 2 | | 182 |
| **VI.—Diseases of the Digestive System.** | | | | | | | | | | | | | | | | | |
| 108 Diseases of the mouth and annexa | 1 | | 1 | | | | | | | | | | | | | | 1 |
| 109 Diseases of the pharynx and tonsils (including adenoid vegetations): | | | | | | | | | | | | | | | | | |
| *(b) Others under this title | 4 | 1 | 1 | 1 | 1 | 1 | | | 1 | | | | | | | | 5 |
| 111 Ulcer of the stomach and duodenum: | | | | | | | | | | | | | | | | | |
| (a) Ulcer of the stomach | 7 | 2 | | | | | | | 1 | 3 | 2 | 2 | 1 | | | | 9 |
| (b) Ulcer of the duodenum | 4 | 2 | | | | | | | 2 | 3 | | 1 | | | | | 6 |
| 112 Other diseases of the stomach (cancer excepted) | 1 | 3 | | | | | | 2 | | | | 1 | 1 | | | | 4 |
| 113 Diarrhea and enteritis (under 2 years of age) | 21 | 21 | 3 | 7 | | | | | | | | | | | | | 42 |
| 114 Diarrhea and enteritis (2 years and over) | 5 | 1 | | 2 | 1 | 1 | 1 | | | 1 | | | | | | | 6 |
| 117 Appendicitis and typhlitis | 20 | 12 | | 2 | 2 | 4 | 8 | 3 | 4 | 5 | 3 | 1 | | | | | 32 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 118 Hernia, intestinal obstruction: | | | | | | | | | | | | | | | | | |
| (a) Hernia | 4 | 4 | | | | | | 2 | 1 | 1 | | 2 | | 2 | | | 8 |
| (b) Intestinal obstruction | 11 | 3 | 3 | 1 | | 1 | 1 | | | | 2 | 2 | 4 | | | | 14 |
| 119 Other diseases of the intestines | 1 | 2 | | | | | | | | | 1 | 1 | 1 | | | | 3 |
| 120 Acute yellow atrophy of the liver | | 2 | | | | | | | 1 | 1 | | | | | | | 2 |
| 122 Cirrhosis of the liver: | | | | | | | | | | | | | | | | | |
| (b) Not specified as alcoholic | 4 | 3 | | | | | | 1 | 1 | | | 2 | 2 | 1 | | | 7 |
| 123 Biliary calculi | 1 | 2 | | | | | | | 1 | 1 | | 1 | | | | | 3 |
| 124 Other diseases of the liver | 6 | 3 | | | | | | | 1 | | 3 | | 4 | 1 | | | 9 |
| 125 Diseases of the pancreas | | 2 | | | | | | | 1 | 1 | | | | | | | 2 |
| 126 Peritonitis without specified cause | 2 | 4 | | 1 | 1 | | | 1 | | 2 | | 1 | | | | | 6 |
| Totals, Class VI. | 92 | 67 | 40 | 14 | 5 | 7 | 10 | 9 | 14 | 18 | 11 | 14 | 13 | 4 | | | 159 |
| **VII.—Nonvenereal Diseases of the Genitourinary System and Annexa.** | | | | | | | | | | | | | | | | | |
| 128 Acute nephritis (inc. unspecified under 10 years of age) | 3 | 2 | 1 | | 1 | | 2 | | | | | | 1 | | | | 5 |
| 129 Chronic nephritis (inc. unspecified 10 years and over) | 30 | 26 | | | | 1 | 4 | 3 | 1 | 10 | 5 | 13 | 14 | 5 | | | 56 |
| 131 Other diseases of the kidneys and annexa | 5 | 1 | | 1 | | 1 | | 2 | | | 1 | | | 1 | | | 6 |
| 135 Diseases of the prostate | 9 | | | | | | | | | | 1 | 2 | 4 | 2 | | | 9 |
| 137 Cysts and other benign tumors of the ovary | | 3 | | | | | | 1 | | | 1 | | 1 | | | | 3 |
| 138 Salpingitis and pelvic abscess (female) | | 2 | | | | | | | 1 | | | 1 | | | | | 2 |
| 141 Other diseases of the female genital organs | | 4 | | | | | | | 1 | 2 | 1 | | | | | | 4 |
| Totals, Class VII. | 47 | 38 | 1 | 1 | 1 | 2 | 6 | 6 | 3 | 12 | 9 | 16 | 20 | 8 | | | 85 |
| **VIII.—The Puerperal State.** | | | | | | | | | | | | | | | | | |
| 143 Accidents of pregnancy: | | | | | | | | | | | | | | | | | |
| (a) Abortion | | 1 | | | | | | | 1 | | | | | | | | 1 |
| (c) Others under this title | | 2 | | | | | | | 2 | | | | | | | | 2 |
| 144 Puerperal hemorrhage | | 4 | | | | | | 2 | 1 | 1 | | | | | | | 4 |
| 145 Other accidents of labor: | | | | | | | | | | | | | | | | | |
| *(a) Cesarean section | | 1 | | | | | | 1 | | | | | | | | | 1 |
| *(c) Others under this title | | 2 | | | | | | 2 | | | | | | | | | 2 |

| 1927 CAUSES OF DEATH (By Sex and Age) | SEX | | AGE IN YEARS | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Under 1 | 1 to 2 | 3 to 4 | 5 to 9 | 10 to 19 | 20 to 29 | 30 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 to 89 | 90 to 99 | Unknown | Totals |
| 146 Puerperal septicemia | | 8 | | | | | | 2 | 6 | | | | | | | | 8 |
| 147 Puerperal phlegmasia, alba dolens, embolus, sudden death | | 5 | | | | | | 2 | 3 | | | | | | | | 5 |
| 148 Puerperal albuminuria and convulsions | | 2 | | | | | | 1 | 1 | | | | | | | | 2 |
| Totals, Class VIII | | 25 | | | | | | 10 | 14 | 1 | | | | | | | 25 |
| **IX.—Diseases of the Skin and of the Cellular Tissue.** | | | | | | | | | | | | | | | | | |
| 151 Gangrene | 1 | 1 | | | | | | | | | | | 1 | | 1 | | 2 |
| 153 Acute abscess | | 2 | 1 | | | | | | | | | 1 | | | | | 2 |
| 154 Other diseases of the skin and annexa | 2 | 2 | 4 | | | | | | | | | | | | | | 4 |
| Totals, Class IX | 3 | 5 | 5 | | | | | | | | | 1 | 1 | | 1 | | 8 |
| **X.—Diseases of the Bones and of the Organs of Locomotion.** | | | | | | | | | | | | | | | | | |
| 155 Diseases of the bones (tuberculosis excepted) | 3 | 2 | | | | 3 | 2 | | | | | | | | | | 5 |
| 156 Diseases of the joints (T.B. and rheumatism excepted) | 1 | 1 | | | | | | 1 | | 1 | | | | | | | 2 |
| Totals, Class X | 4 | 3 | | | | 3 | 2 | 1 | | 1 | | | | | | | 7 |
| **XI.—Malformations.** | | | | | | | | | | | | | | | | | |
| 159 Congenital malformations (stillbirths not included): | | | | | | | | | | | | | | | | | |
| *(a) Congenital hydrocephalus | 1 | 3 | 4 | | | | | | | | | | | | | | 4 |
| *(b) Congenital malformations of the heart | 4 | 4 | 7 | 1 | | | | | | | | | | | | | 8 |
| *(c) Others under this title | 6 | 7 | 13 | | | | | | | | | | | | | | 13 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Totals, Class XI | 11 | 14 | 24 | 1 | | | | | | | | | | | | | 25 |
| | **XII.—Early Infancy.** | | | | | | | | | | | | | | | | | |
| 160 | Congenital debility, icterus, and sclerema | 8 | 5 | 12 | 1 | | | | | | | | | | | | | 13 |
| 161 | Premature birth; Injury at birth: | | | | | | | | | | | | | | | | | |
| | *(a) Premature birth (not stillborn) | 32 | 20 | 52 | | | | | | | | | | | | | | 52 |
| | *(b) Injury at birth (not stillborn) | 12 | 10 | 22 | | | | | | | | | | | | | | 22 |
| 162 | Other diseases peculiar to early infancy | 11 | 10 | 21 | | | | | | | | | | | | | | 21 |
| 163 | Lack of care | 1 | | 1 | | | | | | | | | | | | | | 1 |
| | Totals, Class XII | 64 | 45 | 108 | 1 | | | | | | | | | | | | | 109 |
| | **XIII.—Old Age.** | | | | | | | | | | | | | | | | | |
| 164 | Senility | 3 | 6 | | | | | | | | | | | 2 | 6 | 1 | | 9 |
| | Totals, Class XIII | 3 | 6 | | | | | | | | | | | 2 | 6 | 1 | | 9 |
| | **XIV.—External Causes.** | | | | | | | | | | | | | | | | | |
| 165 | Suicide by solid or liquid poisons (corrosive substances excepted) | | 1 | | | | | | | | | 1 | | | | | | 1 |
| 166 | Suicide by corrosive substances | 1 | 3 | | | | | | 2 | | 2 | | | | | | | 4 |
| 167 | Suicide by poisonous gas | 1 | | | | | | | 1 | | | | | | | | | 1 |
| 168 | Suicide by hanging or strangulation | 4 | | | | | | | | 1 | 3 | | | | | | | 4 |
| 169 | Suicide by drowning | 1 | | | | | | | | | 1 | | | | | | | 1 |
| 170 | Suicide by firearms | 4 | | | | | | 2 | | | 2 | | | | | | | 4 |
| 171 | Suicide by cutting or piercing instruments | 1 | | | | | | | | 1 | | | | | | | | 1 |
| 177 | Other acute accidental poisonings (gas excepted) | 23 | 1 | | | | | | 2 | 8 | 8 | 3 | 1 | 2 | | | | 24 |
| 179 | Accidental burns (conflagration excepted) | 1 | 2 | | 1 | 1 | | | | | 1 | | | | | | | 3 |
| 180 | Accidental mechanical suffocation | 1 | | | | | | | | | | 1 | | | | | | 1 |

| 1927 CAUSES OF DEATH (By Sex and Age) | SEX | | AGE IN YEARS | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Under 1 | 1 to 2 | 3 to 4 | 5 to 9 | 10 to 19 | 20 to 29 | 30 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 to 89 | 90 to 99 | Unknown | Totals |
| 181 Accidental absorption of irrespirable, irritating, or poisonous gas | 1 | 2 | | | | | | 1 | | 1 | 1 | | | | | | 3 |
| 182 Accidental drowning | 8 | | | | | 2 | 3 | | 1 | 1 | | | | | | 1 | 8 |
| 183 Accidental traumatism by firearms (wounds of war ex.) | 3 | | | | | | 1 | | 2 | | | | | | | | 3 |
| 185 Accidental traumatism by fall | 7 | 3 | | | | | 1 | 2 | 2 | 4 | | | | 1 | | | 10 |
| 187 Accidental traumatism by machines | 3 | | | | | | 1 | | 1 | | | | 1 | | | | 3 |
| 188 Accidental traumatism by other crushing (vehicles, railways, landslides, etc.): | | | | | | | | | | | | | | | | | |
| *(a) Railroad accidents | 5 | | | | | | | 1 | 1 | 3 | | | | | | | 5 |
| *(b) Street-car accidents | 1 | 1 | | | | | | 1 | | | | | 1 | | | | 2 |
| *(c) Automobile accidents | 11 | 5 | | 2 | 3 | 2 | 1 | | 1 | 1 | 3 | 1 | 2 | | | | 16 |
| *(e) Motorcycle accidents | 1 | | | | | | | 1 | | | | | | | | | 1 |
| *(f) Injuries by other vehicles | 1 | 1 | | | | | | 1 | | | | 1 | | | | | 2 |
| *(g) Landslides, other crushing | 2 | | | | | | | | 2 | | | | | | | | 2 |
| 189 Injuries by animals (not poisoning) | 1 | | | | | | | | 1 | | | | | | | | 1 |
| 193 Excessive cold | 2 | | | | | | | | | | 2 | | | | | | 2 |
| 196 Other accidental electric shocks | 1 | | | | | | | | 1 | | | | | | | | 1 |
| 197 Homicide by firearms | 2 | | | | | | | 1 | | 1 | | | | | | | 2 |
| 199 Homicide by other means | | 2 | | | | | 1 | 1 | | | | | | | | | 2 |
| (a) Homicide by criminal abortion | | 3 | | | | | | | 3 | | | | | | | | 3 |
| 202 Other external violence | 4 | 1 | | 1 | | | | 1 | | | 1 | 2 | | | | | 5 |
| Totals, Class XIV | 90 | 25 | | 4 | 4 | 4 | 10 | 15 | 25 | 28 | 12 | 5 | 6 | 1 | | 1 | 115 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **XV.—Ill-defined Diseases.** | | | | | | | | | | | | | | | | | |
| 205 Cause of death not specified or ill-defined: *(b) Not specified or unknown | 1 | 1 | 1 | | | | | | | | 1 | | | | | | 2 |
| Totals, Class XV | 1 | 1 | 1 | | | | | | | | 1 | | | | | | 2 |
| Grand Totals | 907 | 743 | 273 | 56 | 27 | 52 | 85 | 92 | 124 | 188 | 179 | 239 | 244 | 80 | 10 | 1 | 1,650 |

| 1927 CAUSES OF DEATH (By Month) | January | February | March | April | May | June | July | August | September | October | November | December | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I.—Epidemic, Endemic and Infectious Diseases.** | | | | | | | | | | | | | |
| 1 Typhoid and paratyphoid fever: | | | | | | | | | | | | | |
| (a) Typhoid fever | | 1 | 1 | | 1 | | | | 2 | | | 1 | 6 |
| (b) Paratyhpoid fever | | | | | | | | | | | | 1 | 1 |
| 7 Measles | | 1 | | 1 | | | | 1 | | | | | 3 |
| 8 Scarlet fever | 2 | | 1 | | 1 | | | | 1 | | | 1 | 6 |
| 9 Whooping Cough | 1 | | | | | 1 | | 2 | | 3 | | | 7 |
| 10 Diphtheria | 2 | 4 | 1 | 3 | 1 | 4 | 4 | 2 | 3 | 4 | 1 | 5 | 34 |
| 11 Influenza: | | | | | | | | | | | | | |
| (a) With pulmonary complications specified | 5 | 8 | | | | | | | | 1 | 1 | 3 | 18 |
| (b) Without pulmonary complications specified | 1 | 9 | 2 | 1 | 2 | 1 | 1 | | | 3 | 1 | 3 | 24 |
| Totals, Nos. 1 to 11 | 11 | 23 | 5 | 5 | 5 | 6 | 5 | 5 | 6 | 11 | 3 | 14 | 99 |
| 16 Dysentery: | | | | | | | | | | | | | |
| (c) Unspecified or due to other causes | | | | | | | | | 1 | | | | 1 |
| 21 Erysipelas | 1 | 1 | 1 | 1 | | | | 1 | | 1 | | 1 | 7 |
| 22 Acute anterior poliomyelitis | | | | | | | | | 1 | | | | 1 |
| 23 Lethargic encephalitis | | | | 3 | | | 1 | | | | | | 4 |
| 24 Meingococcus meningitis | | | | 1 | 2 | 1 | | | | | | | 4 |
| 29 Tetanus | | | | | | 1 | | | | | | | 1 |
| 30 Mycoses | | | | | | | | 1 | | | | | 1 |
| 31 Tuberculosis of the respiratory system | 8 | 6 | 7 | 4 | 4 | 5 | 8 | 4 | 4 | 8 | 11 | 5 | 74 |
| 32 Tuberculosis of the Meninges and Central Nervous System | | 1 | 2 | | 2 | | | 1 | 1 | 2 | | | 9 |
| 34 Tuberculosis of the vertebral column | | | | 1 | 1 | | | | | | | | 2 |
| 35 Tuberculosis of the joints | | | 1 | | | | | | | | | | 1 |
| 36 Tuberculosis of other organs: | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (b) Tuberculosis of bones (vertebral column excepted) | | | | 1 | | | | | | | | | 1 |
| (c) Tuberculosis of lymphatic system (mesenteric and retroperitoneal glands excepted) | | | 1 | | | | | | | | | | 1 |
| (e) Tuberculosis of organs other than the above | | | | 1 | | | | | | | | | 1 |
| 37 Disseminated tuberculosis: | | | | | | | | | | | | | |
| (a) Acute | | | | | | | 1 | | | 1 | | 1 | 3 |
| (b) Chronic or unspecified | | | | | 1 | | | | | | | | 1 |
| Totals, Nos. 31 to 37 | 8 | 7 | 11 | 7 | 8 | 5 | 9 | 5 | 5 | 11 | 11 | 6 | 93 |
| 38 Syphilis | | 1 | 4 | | | | 1 | 1 | | 3 | 2 | 1 | 13 |
| 40 Gonococcus infection | | | | | | | | | 1 | | | | 1 |
| 41 Purulent infection, septicemia | 4 | 1 | 2 | 2 | 2 | 2 | | 1 | 1 | | 2 | | 17 |
| Totals, Class I. | 24 | 33 | 23 | 19 | 17 | 15 | 16 | 14 | 15 | 26 | 18 | 22 | 242 |
| **II.—General Diseases Not Included in Class I.** | | | | | | | | | | | | | |
| 43 Cancer and other malignant tumors of the buccal cavity | 2 | | 1 | 2 | 2 | 1 | | 1 | | | 2 | | 11 |
| 44 Cancer and other malignant tumors of the stomach, liver | 11 | 2 | 5 | 4 | 7 | 6 | 4 | 5 | 5 | 5 | 6 | 5 | 65 |
| 45 Cancer and other malignant tumors of the peritoneum, intestines, rectum | 4 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 5 | 25 |
| 46 Cancer and other malignant tumors of the female genital organs | 2 | 6 | 5 | 3 | 2 | 1 | 2 | 7 | 4 | 1 | 1 | 1 | 35 |
| 47 Cancer and other malignant tumors of the breast | 2 | 1 | | 3 | 1 | 2 | | | 1 | 3 | 1 | 1 | 15 |
| 48 Cancer and other malignant tumors of the skin | 1 | | | | | | 1 | 1 | | | | | 3 |
| 49 Cancer and other malignant tumors of other or unspecified organs | 6 | 4 | 6 | 2 | 4 | 5 | 5 | 3 | 6 | 5 | 1 | 3 | 50 |
| Totals, Nos. 43 to 49 | 28 | 14 | 18 | 15 | 18 | 17 | 14 | 19 | 17 | 16 | 13 | 15 | 204 |
| 50 Benign tumors and tumors not returned as malignant (tumor) of the female genital organs excepted) | | | 1 | | | | | 1 | | 1 | | | 3 |
| 51 Acute rheumatic fever | 2 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | 10 |
| 52 Chronic rheumatism, osteoarthritis, gout | | | | 1 | | 1 | | | | | | | 2 |

| 1927 CAUSES OF DEATH (By Month) | January | February | March | April | May | June | July | August | September | October | November | December | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 Rickets | | | 1 | | | | | | | | | | 1 |
| 57 Diabetes mellitus | 5 | 3 | 1 | | 4 | 1 | 1 | 3 | 1 | 3 | 3 | 2 | 27 |
| 58 Anemia, cholorosis: | | | | | | | | | | | | | |
| (a) Pernicious anemia | 1 | | 1 | 1 | | | | 1 | 1 | | | 1 | 6 |
| 60 Diseases of the thyroid gland: | | | | | | | | | | | | | |
| (a) Exophthalmic goiter | | 1 | | 2 | | | 1 | 1 | 1 | | | 2 | 8 |
| (b) Other diseases of the thyroid gland | | | 2 | | 1 | | | | | | 1 | 1 | 5 |
| 61 Diseases of the parathyroid glands | | | | | | 1 | | | | | | | 1 |
| 62 Diseases of the thymus gland | | | | | | | | | | | 1 | | 1 |
| 63 Diseases of the adrenals (Addison's disease) | | | | | | | 1 | | | | | | 1 |
| 65 Leukemia and Hodgkin's disease: | | | | | | | | | | | | | |
| (a) Leukemia | | 1 | 1 | | | | 1 | 1 | | | 1 | | 5 |
| (b) Hodgkin's disease | 1 | 1 | | | | | | | | | | | 2 |
| 69 Other general diseases | | | 1 | | | | | | | 1 | | | 2 |
| Totals, Class II | 37 | 21 | 26 | 20 | 24 | 21 | 19 | 27 | 21 | 21 | 19 | 22 | 278 |
| **III.—Diseases of the Nervous System and of the Organs of Special Sense.** | | | | | | | | | | | | | |
| 70 Encephalitis | | | | 1 | 1 | | | 3 | | 2 | | | 7 |
| 71 Meningitis: | | | | | | | | | | | | | |
| *(a) Simple meningitis | 1 | | 1 | 1 | 1 | | | 1 | | 2 | 1 | | 8 |
| *(b) Nonepidemic cerebrospinal meningitis | | 1 | 1 | | | | | | | | | | 2 |
| 72 Tabes dorsalis (locomotor ataxia) | 1 | | | | | | | | | | | | 1 |
| 73 Other diseases of the spinal cord | | | | | | | | 1 | | 1 | | 1 | 3 |
| 74 Cerebral hemorrhage, apoplexy: | | | | | | | | | | | | | |
| (a) Cerebral hemorrhage | 7 | 9 | 7 | 5 | 4 | 4 | 2 | 4 | 3 | 9 | 9 | 5 | 68 |
| (b) Cerebral embolism and thrombosis | 2 | | | | 1 | | 1 | 2 | | | | 2 | 8 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 Paralysis without specified cause: | | | | | | | | | | | | | |
| (a) Hemiplegia | | 1 | | | | | 1 | 1 | 1 | 1 | | | 5 |
| (b) Others under this title | | | | 1 | | | | | | | | | 1 |
| 76 General paralysis of the insane | | 1 | | 1 | | | | | | | | | 2 |
| 77 Other forms of mental alienation | 1 | | | | | | | 2 | | | | | 3 |
| 80 Infantile convulsions (under 5 years of age) | | | | 1 | | | | | | | 1 | 1 | 3 |
| 83 Softening of the brain | | | | | | | | | | 1 | | | 1 |
| 84 Other diseases of the nervous system | | 1 | 1 | 3 | | 1 | 1 | | 2 | 2 | 4 | | 15 |
| 86 Diseases of the ear and of the mastoid process: | | | | | | | | | | | | | |
| *(a) Diseases of the ear | | 2 | | 1 | | | | | | 2 | | 1 | 6 |
| *(b) Diseases of the mastoid process | 4 | | 2 | | | | | | | | | | 6 |
| Totals, Class III | 16 | 15 | 12 | 14 | 7 | 5 | 5 | 14 | 6 | 20 | 15 | 10 | 139 |
| **IV.—Diseases of the Circulatory System.** | | | | | | | | | | | | | |
| 87 Pericarditis | | 1 | | 1 | | | | | | | | | 2 |
| 88 Endocarditis and myocarditis (acute) | | | 1 | | | | | | | 3 | 2 | 4 | 10 |
| 89 Angina pectoris | 2 | 1 | 2 | 1 | 2 | 2 | | | 2 | 4 | | 3 | 19 |
| 90 Other diseases of the heart | 18 | 27 | 12 | 13 | 14 | 26 | 11 | 9 | 21 | 17 | 12 | 13 | 193 |
| 91 Diseases of the arteries: | | | | | | | | | | | | | |
| (a) Aneurysm | | 1 | 1 | 1 | | | | 1 | | | | | 4 |
| (b) Arteriosclerosis | | | 3 | | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 15 |
| (c) Other diseases of the arteries | | 1 | | | | | | | | | | | 1 |
| 92 Embolism and thrombosis (not cerebral) | 2 | 5 | | 3 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 21 |
| Totals, Class IV | 22 | 36 | 19 | 19 | 19 | 31 | 13 | 13 | 25 | 28 | 18 | 22 | 265 |
| **V.—Diseases of the Respiratory System.** | | | | | | | | | | | | | |
| 97 Diseases of the nasal fossae and their annexa: | | | | | | | | | | | | | |
| *(a) Diseases of the nasal fossae | | 1 | | | | | | | | | | | 1 |
| 98 Diseases of the larynx | 1 | | | | | | 1 | | | | | 1 | 3 |
| 99 Bronchitis: | | | | | | | | | | | | | |
| (a) Acute | | 1 | | | | | | | | 1 | | 1 | 3 |
| (b) Chronic | | | 1 | | | | | | | 1 | 1 | | 3 |
| (c) Unspecified (under 5 years of age) | | | | | | | | | | | | 1 | 1 |
| (d) Unspecified (5 years and over) | | 1 | | 1 | | | | 1 | | | | 1 | 4 |

| 1927 CAUSES OF DEATH (By Month) | January | February | March | April | May | June | July | August | September | October | November | December | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 Bronchopneumonia: | | | | | | | | | | | | | |
| *(a) Bronchopneumonia | 8 | 17 | 9 | 6 | 6 | 4 | 2 | 2 | 2 | 7 | 2 | 13 | 78 |
| 101 Pneumonia: | | | | | | | | | | | | | |
| (a) Lobar | 12 | 17 | 2 | 5 | 8 | 4 | | 4 | 3 | 3 | 5 | 4 | 67 |
| (b) Unspecified | | 3 | 1 | | 1 | | 1 | | | | | | 6 |
| 102 Pleurisy | | 2 | 1 | 4 | | | | | | | | | 7 |
| 103 Congestion and hemorrhagic infarct of the lung | 1 | | | | | | | | | 1 | | 1 | 3 |
| 105 Asthma | | | | 1 | | 1 | | | 1 | | | | 3 |
| 107 Other diseases of the respiratory system (T.B. excepted) | | | | | | | | | | | | | |
| (b) Diseases of the mediastinum | | | | | | | | | | | | 1 | 1 |
| (c) Others under this title | | | | | | 1 | 1 | | | | | | 2 |
| Totals, Class V. | 22 | 42 | 14 | 17 | 15 | 10 | 5 | 7 | 6 | 13 | 8 | 23 | 182 |
| **VI.—Diseases of the Digestive System.** | | | | | | | | | | | | | |
| 108 Diseases of the mouth and annexa | | | | 1 | | | | | | | | | 1 |
| 109 Diseases of the pharynx and tonsils (including adenoid vegetations): | | | | | | | | | | | | | |
| *(b) Others under this title | | 1 | | 1 | | | 1 | | 1 | 1 | | | 5 |
| 111 Ulcer of the stomach and duodenum: | | | | | | | | | | | | | |
| (a) Ulcer of the stomach | | 2 | 1 | 1 | | | 1 | | 2 | 1 | 1 | | 9 |
| (b) Ulcer of the duodenum | 1 | | | | | | 1 | | 1 | 2 | 1 | | 6 |
| 112 Other diseases of the stomach (cancer excepted) | | | | 1 | | | | 1 | | 1 | 1 | | 4 |
| 113 Diarrhea and enteritis (under 2 years of age) | 2 | | 2 | 1 | | 1 | 3 | 4 | 18 | 4 | 6 | 1 | 42 |
| 114 Diarrhea and enteritis (2 years and over) | | 1 | | | 1 | | | 1 | 1 | | | 2 | 6 |
| 117 Appendicitis and typhlitis | 5 | 4 | | 4 | 7 | 1 | | 1 | 5 | 2 | 1 | 2 | 32 |
| 118 Hernia, intestinal obstruction: | | | | | | | | | | | | | |
| (a) Hernia | 2 | | 1 | 2 | | | 2 | | | 1 | | | 8 |
| (b) Intestinal obstruction | | 1 | 1 | | 2 | 2 | | 2 | 1 | 2 | 1 | 2 | 14 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 119 Other diseases of the intestines | | | | 1 | | | 2 | | | | | | 3 |
| 120 Acute yellow atrophy of the liver | | | | | 1 | | 1 | | | | | | 2 |
| 122 Cirrhosis of the liver: | | | | | | | | | | | | | |
| (b) Not specified as alcoholic | | | 1 | | 2 | | | | | 2 | 1 | 1 | 7 |
| 123 Biliary calculi | 1 | 1 | | 1 | | | | | | | | | 3 |
| 124 Other diseases of the liver | | | 1 | | | 1 | 2 | 2 | 1 | 1 | 1 | | 9 |
| 125 Diseases of the pancreas | 1 | | | | | 1 | | | | | | | 2 |
| 126 Peritonitis without specified cause | | 1 | | 3 | | | | | 1 | | | 1 | 6 |
| Totals, Class VI. | 12 | 11 | 7 | 16 | 13 | 6 | 13 | 11 | 31 | 17 | 13 | 9 | 159 |
| **VII.—Nonvenereal Diseases of the Genitourinary System and Annexa.** | | | | | | | | | | | | | |
| 128 Acute nephritis (inc. unspecified under 10 years of age) | 1 | 1 | | | 2 | | 1 | | | | | | 5 |
| 129 Chronic nephritis (inc. unspecified 10 years and over) | 3 | 6 | 4 | 4 | 8 | 2 | 5 | 4 | 7 | 3 | 5 | 5 | 56 |
| 131 Other diseases of the kidneys and annexa | | | | 1 | 1 | 1 | | 1 | 1 | 1 | | | 6 |
| 135 Diseases of the prostate | 1 | | | 2 | 1 | 1 | | 2 | | | | | 9 |
| 137 Cysts and other benign tumors of the ovary | | 1 | | | | | | | 1 | | 1 | | 3 |
| 138 Salpingitis and pelvic abscess (female) | | | | | | 1 | | | | | 1 | | 2 |
| 141 Other diseases of the female genital organs | 1 | | 1 | | | 1 | | | | 1 | | | 4 |
| Totals, Class VII. | 6 | 8 | 5 | 7 | 12 | 6 | 6 | 7 | 9 | 5 | 7 | 7 | 85 |
| **VIII.—The Puerperal State.** | | | | | | | | | | | | | |
| 143 Accidents of pregnancy: | | | | | | | | | | | | | |
| (a) Abortion | | | 1 | | | | | | | | | | 1 |
| (c) Others under this title | | 2 | | | | | | | | | | | 2 |
| 144 Puerperal hemorrhage | 1 | 1 | | | | 1 | | | 1 | | | | 4 |
| 145 Other accidents of labor: | | | | | | | | | | | | | |
| *(a) Cesarean section | | | | | | | | | | | 1 | | 1 |
| *(c) Others under this title | | | | | | 1 | | | 1 | | | | 2 |
| 146 Puerperal septicemia | 1 | 1 | 2 | 1 | 1 | | 1 | | | | | 1 | 8 |
| 147 Puerperal phlegmasia, alba dolens, embolus, sudden death | | | | | | 2 | 1 | | | 1 | | 1 | 5 |
| 148 Puerperal albuminuria and convulsions | | | | | | | | | | 1 | | 1 | 2 |
| Totals, Class VIII. | 2 | 4 | 3 | 1 | 1 | 4 | 2 | | 2 | 2 | 1 | 3 | 25 |

| 1927 CAUSES OF DEATH (By Month) | January | February | March | April | May | June | July | August | September | October | November | December | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **IX.—Diseases of the Skin and of the Cellular Tissue.** | | | | | | | | | | | | | |
| 151 Gangrene | | | 1 | | | | | 1 | | | | | 2 |
| 153 Acute abscess | | | 2 | | | | | | | | | | 2 |
| 154 Other diseases of the skin and annexa | | 1 | 1 | 1 | | | | | | 1 | | | 4 |
| Totals, Class IX | | 1 | 4 | 1 | | | | 1 | | 1 | | | 8 |
| **X.—Diseases of the Bones and of the Organs of Locomotion.** | | | | | | | | | | | | | |
| 155 Diseases of the bones (tuberculosis excepted) | | 2 | 1 | | | | | | 1 | 1 | | | 5 |
| 156 Diseases of the joints (T.B. and rheumatism excepted) | | 1 | 1 | | | | | | | | | | 2 |
| Totals, Class X | | 3 | 2 | | | | | | 1 | 1 | | | 7 |
| **XI.—Malformations.** | | | | | | | | | | | | | |
| 159 Congenital malformations (stillbirths not included): | | | | | | | | | | | | | |
| *(a) Congenital hydrocephalus | 1 | | | | 1 | 1 | | | | | 1 | | 4 |
| *(b) Congenital malformations of the heart | 1 | 1 | 2 | | | 1 | | | | 1 | | 2 | 8 |
| *(c) Others under this title | | 1 | 2 | 1 | 2 | 3 | | | 1 | 1 | 1 | 1 | 13 |
| Totals, Class XI | 2 | 2 | 4 | 1 | 3 | 5 | | | 1 | 2 | 2 | 3 | 25 |
| **XII.—Early Infancy.** | | | | | | | | | | | | | |
| 160 Congenital debility, icterus, and sclerema | 4 | | 1 | 1 | 1 | 2 | 2 | | | | 2 | | 13 |
| 161 Premature birth; Injury at birth: | | | | | | | | | | | | | |
| *(a) Premature birth (not stillborn) | 5 | 4 | 3 | 3 | 2 | 1 | 3 | 5 | 8 | 9 | 6 | 3 | 52 |
| *(b) Injury at birth (not stillborn) | 1 | 3 | 3 | 2 | | 2 | | 2 | 3 | 1 | 3 | 2 | 22 |
| 162 Other diseases peculiar to early infancy | 1 | 1 | | 3 | 1 | 4 | 1 | 2 | 3 | | 1 | 4 | 21 |
| 163 Lack of care | | | | 1 | | | | | | | | | 1 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Totals, Class XII | 11 | 8 | 7 | 10 | 4 | 9 | 6 | 9 | 14 | 10 | 12 | 9 | 109 |
| **XIII.—Old Age.** | | | | | | | | | | | | | |
| 164 Senility | 2 | | | 1 | | | 1 | | 2 | 1 | 1 | 1 | 9 |
| Totals, Class XIII | 2 | | | 1 | | | 1 | | 2 | 1 | 1 | 1 | 9 |
| **XIV.—External Causes.** | | | | | | | | | | | | | |
| 165 Suicide by solid or liquid poisons (corrosive substances excepted) | | | | | | | | 1 | | | | | 1 |
| 166 Suicide by corrosive substances | 1 | | | | | | | 1 | 1 | | | 1 | 4 |
| 167 Suicide by poisonous gas | | | | | | | | | | | 1 | | 1 |
| 168 Suicide by hanging or strangulation | | | 1 | 1 | | | 1 | | | | 1 | | 4 |
| 169 Suicide by drowning | | | | | | | 1 | | | | | | 1 |
| 170 Suicide by firearms | 1 | 1 | | | | | 1 | | | | | 1 | 4 |
| 171 Suicide by cutting or piercing instruments | | | 1 | | | | | | | | | | 1 |
| 177 Other acute accidental poisonings (gas excepted) | | 1 | 2 | | | 4 | | 2 | 1 | 2 | 1 | 11 | 24 |
| 179 Accidental burns (conflagration excepted) | | | | | | | | 1 | 1 | | 1 | | 3 |
| 180 Accidental mechanical suffocation | | | | 1 | | | | | | | | | 1 |
| 181 Accidental absorption of irrespirable, irritating, or poisonous gas | | | 1 | | | | 1 | | | 1 | | | 3 |
| 182 Accidental drowning | | | 1 | 1 | 1 | 1 | 2 | 2 | | | | | 8 |
| 183 Accidental traumatism by firearms (wounds of war ex.) | | | | | | | | 2 | 1 | | | | 3 |
| 185 Accidental traumatism by fall | 1 | | 2 | | | | | 1 | 5 | 1 | | | 10 |
| 187 Accidental traumatism by machines | | | | | | | | | 1 | | 1 | 1 | 3 |
| 188 Accidental traumatism by other crushing (vehicles, railways, landslides, etc.): | | | | | | | | | | | | | |
| *(a) Railroad accidents | 1 | | 1 | | | 1 | | | | 1 | | 1 | 5 |
| *(b) Street car accidents | | | | 1 | | 1 | | | | | | | 2 |
| *(c) Automobile accidents | | | 1 | 3 | | 3 | 1 | 3 | 3 | 1 | | 1 | 16 |
| *(e) Motorcycle accidents | | | | | | | | | 1 | | | | 1 |
| *(f) Injuries by other vehicles | | | | | | 1 | | | | 1 | | | 2 |
| *(g) Landslides, other crushing | | | | | | | 1 | | | 1 | | | 2 |
| 189 Injuries by animals (not poisoning) | | | 1 | | | | | | | | | | 1 |

| 1927 CAUSES OF DEATH (By Month) | January | February | March | April | May | June | July | August | September | October | November | December | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 193 Excessive cold | 1 | | | | | | | | | | | 1 | 2 |
| 196 Other accidental electric shocks | | | | | | | | | | | | 1 | 1 |
| 197 Homicide by firearms | 1 | | | 1 | | | | | | | | | 2 |
| 199 Homicide by other means | | | | | | 2 | | | | | | | 2 |
| (a) Homicide by criminal abortion | | | 2 | | | 1 | | | | | | | 3 |
| 202 Other external violence | 1 | | | | | | 1 | 2 | | | 1 | | 5 |
| Totals, Class XIV | 7 | 2 | 13 | 8 | 1 | 14 | 9 | 1 | 14 | 8 | 6 | 18 | 115 |
| **XV.—Ill-defined Diseases.** | | | | | | | | | | | | | |
| 205 Cause of death not specified or ill-defined: | | | | | | | | | | | | | |
| *(b) Not specified or unknown | | | | 1 | | | | | | | 1 | | 2 |
| Totals, Class XV | | | | 1 | | | | | | | 1 | | 2 |
| Grand Totals | 163 | 186 | 139 | 135 | 116 | 126 | 95 | 118 | 147 | 155 | 121 | 149 | 1,650 |

# Report of Street Cleaning Division

A. J. Douglas, Esq., M.D.,
Medical Health Officer.

Dear Sir:

I beg to submit herewith a report on the operations of this Division for the year ended December 31st, 1927.

The re-organization, which was carried out in the year 1926, has shown gratifying results and is reflected in the additional work accomplished at no great increase in cost.

The truck and trailer equipment has been operated intensively, all units being in constant service, which is an improvement over former years. In my opinion, at least six additional side dump drop frame trailers should be purchased this coming year, in order to enlarge this method of collection. The Motor equipment has been in constant service since 1920, and is now showing signs of wear. It would be wise for the City to purchase at least one new Motor Truck, specially adapted to hauling trailers, so that there would be no possibility of a tie up in the Scavenging service due to motor troubles.

The statistics attached hereto show that during the year 1927, the total garbage collected amounted to 42,325,430 lbs., or an increase of 1,846,250 lbs., over the year 1926. This represents an increase of 6053 lbs. per working day. The collection of incombustible material increase by 2,684,870 lbs. or 8,802 lbs. per working day.

The Saskatchewan Avenue Incinerator was closed down between September 3rd and December 8th, during which time two steam boilers were installed in the Plant. The steam generated at this Plant is to be supplied to the Anthes Foundry for heating purposes.

Revenue received from the Incinerators for the year amounted to $3,890.32 as against $3,162.14 for the previous year.

Elmwood Stable was closed down in the month of October and the horses transferred to the Pacific Avenue Stable. This centralization has brought about a considerable improvement in the utilization of the man and horse power of the Division.

In the matter of Ash Removal, a great deal of credit is due the City Engineers' Department for their co-operation in furnishing this Division with suitable dumps. I might also mention here that a large quantity of ashes was hauled to the Nuisance Grounds to build up roads and cover over fills, in preparing the ground for Spring work.

Asphalt Cleaning was given more attention this year than last. During the year 28,730 cubic yards of sweepings were collected as against 21,620 in 1926. Owing to the prevalence of parked motor vehicles on the down town streets, it was found advisable to clean the business section of the City at night.

The horse drawn power flushers made their appearance on the street during the hot weather; this being the first flushing since the year 1924. The practice of flushing pavements is a good one, as the application of cold water to hot pavement cools the air, and cleanses the pavement.

Your obedient servant,

E. A. WOOD,

Chief, Street Cleaning Division.

## ACTUAL COST OF SCAVENGING DURING 1927—GARBAGE, TINS, N. S. AND ASHES

| 1927 | Horse Feed St. No. 1 and 2 | Horse Shoeing | Harness Repairs | Sundays & Holidays in Barn | Wagon Repairs | WAGES | | Cost of Trucks & Trailers | Gross Cost |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | City Owned | Hired | | |
| January | $ 607.50 | $ 19.24 | $ 12.99 | $ 101.01 | $ 31.55 | $1,877.51 | $3,856.25 | $7,424.00 | $13,930.05 |
| February | 516.06 | 63.45 | 16.92 | 25.38 | 111.35 | 1,550.94 | 4,425.03 | 6,639.48 | 13,348.61 |
| March | 895.62 | 121.44 | 22.77 | 45.54 | 236.66 | 2,805.94 | 6,959.09 | 7,463.99 | 18,551.05 |
| April | 846.68 | 152.68 | 48.58 | 180.44 | 161.56 | 2,637.73 | 5,849.76 | 7,285.75 | 17,163.18 |
| May | 1,072.26 | 153.18 | 42.55 | 221.26 | 31.23 | 3,055.45 | 4,578.70 | 6,966.11 | 16,120.74 |
| June | 951.17 | 122.24 | 53.48 | 45.84 | 2.70 | 2,939.26 | 1,646.21 | 7,730.86 | 13,491.76 |
| July | 733.71 | 88.00 | 33.00 | 253.00 | 8.91 | 2,447.51 | 527.49 | 7,232.94 | 11,324.56 |
| August | 775.01 | 106.08 | 24.96 | 143.52 | 16.70 | 2,703.43 | 149.75 | 7,628.23 | 11,547.68 |
| September | 702.58 | 82.66 | 34.44 | 140.06 | 113.97 | 2,302.35 | 121.00 | 7,448.88 | 10,945.94 |
| October | 739.32 | 72.60 | 18.15 | 36.30 | 69.34 | 2,122.94 | 385.41 | 6,993.31 | 10,437.37 |
| November | 523.60 | 102.75 | 16.44 | 102.75 | 39.61 | 1,675.61 | 2,890.74 | 7,892.95 | 13,244.45 |
| December | 418.46 | 37.73 | 9.26 | 75.46 | 113.90 | 1,264.47 | 4,466.01 | 7,577.28 | 13,962.57 |
| | $8,781.97 | $1,122.05 | $333.54 | $1,370.56 | $937.48 | $27,383.14 | $35,855.44 | $88,283.78 | $164,067.96 |

## SUMMARY OF OPERATION FOR INCINERATOR No. 2—TOTAL COST

| 1927 | Total Weight Burned | Wages | Fuel, Power, Light | Gross Cost | Revenue | Net Cost | Gross Cost Per Ton | Net Cost Per Ton |
|---|---|---|---|---|---|---|---|---|
| January | 1,632,795 lbs. | $ 828.57 | $ 18.72 | $ 847.29 | $ 186.90 | $ 660.39 | $1.038 | $0.809 |
| February | 1,556,390 " | 768.73 | 16.03 | 784.76 | 214.07 | 570.69 | 1.008 | 0.733 |
| March | 1,821,680 " | 896.55 | 15.66 | 912.21 | 84.02 | 828.19 | 1.001 | 0.909 |
| April | 2,100,050 " | 879.77 | 14.10 | 893.87 | 146.44 | 747.43 | 0.851 | 0.711 |
| May | 1,916,330 " | 891.98 | 11.42 | 903.40 | 219.81 | 683.59 | 0.943 | 0.713 |
| June | 2,240,685 " | 953.15 | 11.62 | 964.77 | 254.19 | 710.58 | 0.861 | 0.634 |
| July | 2,017,390 " | 980.27 | 9.58 | 989.85 | 206.13 | 783.72 | 0.982 | 0.777 |
| August | 2,226,810 " | 1,018.70 | 11.20 | 1,029.90 | 217.10 | 812.80 | 0.925 | 0.730 |
| September | 2,596,960 " | 1,058.01 | 12.94 | 1,070.95 | 254.84 | 816.11 | 0.825 | 0.636 |
| October | 2,080,760 " | 871.31 | 14.78 | 886.09 | 240.81 | 645.28 | 0.852 | 0.620 |
| November | 1,791,600 " | 850.77 | 14.80 | 865.57 | 219.27 | 646.30 | 0.966 | 0.721 |
| December | 1,677,120 " | 898.56 | 16.48 | 915.04 | 221.29 | 693.75 | 1.090 | 0.826 |
| | 23,658,570 lbs. | $10,896.37 | $167.33 | $11,063.70 | 2,464.87 | $8,598.83 | $0.935 | $0.726 |

## SUMMARY OF OPERATION FOR INCINERATORS Nos. 3 AND 1

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| January | 1,541,220 lbs. | $ 928.44 | $ 59.82 | $ 988.26 | $ 104.21 | $ 884.05 | $1.281 | $1.146 |
| February | 1,410,340 " | 862.22 | 53.08 | 915.30 | 117.05 | 798.25 | 1.298 | 1.132 |
| March | 1,728,260 " | 965.51 | 58.26 | 1,023.77 | 225.55 | 798.22 | 1.184 | 0.923 |
| April | 1,774,170 " | 897.54 | 52.99 | 950.53 | 118.96 | 831.57 | 1.071 | 0.937 |
| May | 2,416,430 " | 1,051.83 | 65.16 | 1,116.99 | 205.40 | 911.59 | 0.924 | 0.754 |
| June | 2,217,760 " | 928.81 | 48.42 | 977.23 | 137.55 | 839.68 | 0.881 | 0.757 |
| July | 1,992,600 " | 1,156.25 | 45.96 | 1,202.21 | 117.25 | 1,084.96 | 1.207 | 1.089 |
| August | 2,262,030 " | 1,149.69 | 51.84 | 1,201.53 | 156.40 | 1,045.13 | 1.062 | 0.924 |
| September | 2,223,940 " | 1,094.66 | 10.32 | 1,104.98 | 73.55 | 1,031.43 | 0.993 | 0.927 |
| October | 2,010,940 " | 1,003.32 | 14.38 | 1,017.70 | 73.15 | 944.55 | 1.012 | 0.939 |
| November | 1,699,200 " | 945.36 | 16.28 | 961.64 | 40.40 | 921.24 | 1.131 | 1.083 |
| December | 1,616,390 " | 1,025.45 | 46.15 | 1,071.60 | 49.00 | 1,022.60 | 1.326 | 1.265 |
| | 22,893,280 lbs. | $12,009.08 | $522.66 | $12,531.74 | $1,418.47 | $11,113.27 | $1.094 | $0.970 |

Incinerator No. 1 opened September 6, 1927.

## LOADS AND WEIGHTS OF GARBAGE ,TINS AND ASHES FOR 1927—MONTHLY TOTALS

| 1927 | GARBAGE | | | | | | | | | ASHES | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TEAMS | | | SINGLES | | | TRUCKS | | | TEAMS | | | TRUCKS | | |
| | No. of Lds. | Weight | Avg. Wt. to Ld. | No. of Lds. | Weight | Avg. Wt. to Ld. | No. of Lds. | Weight | Avg. Wt. to Ld. | No. of Lds. | Weight | Cu. Yd. | No. of Ld. | Weight | Cu. Yd. |
| January | 83 | 182,320 | 2196 | 69 | 115,320 | 1671 | 917 | 2,529,190 | 2758 | 1955 | 9,775,000 | 9775 | 222 | 1,429,000 | 1429 |
| February | 57 | 130,760 | 2294 | 66 | 110,320 | 1671 | 868 | 2,380,070 | 2742 | 2670 | 12,015,000 | 12015 | 455 | 2,830,000 | 2830 |
| March | 67 | 162,640 | 2427 | 80 | 137,750 | 1722 | 962 | 2,925,030 | 3040 | 5345 | 24,052,000 | 24052 | 547 | 3,401,000 | 3401 |
| April | 120 | 319,640 | 2663 | 61 | 117,230 | 1921 | 927 | 3,128,570 | 3367 | 6399 | 28,795,000 | 28795 | 41 | 257,000 | 257 |
| May | 294 | 978,280 | 3327 | 47 | 86,950 | 1850 | 832 | 2,819,850 | 3389 | 2093 | 9,418,000 | 9418 | 12 | 80,000 | 80 |
| June | 146 | 375,820 | 2574 | 78 | 166,095 | 2129 | 994 | 3,526,915 | 3548 | 205 | 922,000 | 922 | ..... | ..... | ..... |
| July | 120 | 298,700 | 2489 | 59 | 149,290 | 2530 | 885 | 3,246,540 | 3668 | 60 | 270,000 | 270 | ..... | ..... | ..... |
| August | 132 | 312,910 | 2370 | 70 | 172,490 | 2464 | 986 | 3,605,140 | 2656 | 37 | 166,000 | 166 | ..... | ..... | ..... |
| September | 102 | 319,990 | 3137 | 82 | 185,530 | 2262 | 966 | 4,036,630 | 4178 | 47 | 212,000 | 212 | ..... | ..... | ..... |
| October | 110 | 300,880 | 2735 | 33 | 66,610 | 2018 | 927 | 3,388,910 | 3655 | 118 | 531,000 | 531 | 10 | 70,000 | 70 |
| November | 95 | 209,320 | 2203 | ..... | ..... | ..... | 955 | 2,925,480 | 3063 | 859 | 3,865,000 | 3865 | 85 | 584,000 | 584 |
| December | 85 | 160,890 | 1892 | ..... | ..... | ..... | 1011 | 2,753,370 | 2723 | 1843 | 8,293,000 | 8293 | 375 | 2,008,000 | 2008 |
| | 1411 | 3,752,150 | 2659 | 645 | 1,307,585 | 2027 | 11230 | 37,265,695 | 3318 | 21631 | 98,314,000 | 98314 | 1747 | 10,659,000 | 10659 |

| 1927 | TINS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | TEAMS | | | SINGLES | | | TRUCKS | | |
| | No. of Lds. | Weight | Avg. Wt. to Ld. | No. of Lds. | Weight | Avg. Wt. to Ld. | No. of Lds. | Weight | Avg. Wt. to Ld. |
| January | 187 | 427,270 | 2284 | 112 | 198,730 | 1774 | 130 | 376,290 | 2894 |
| February | 174 | 398,920 | 2292 | 70 | 116,140 | 1659 | ..... | ..... | ..... |
| March | 457 | 986,200 | 2158 | 78 | 134,700 | 1727 | ..... | ..... | ..... |
| April | 378 | 931,120 | 2463 | 42 | 71,160 | 1694 | 258 | 769,380 | 2982 |
| May | 359 | 922,480 | 2569 | 35 | 59,650 | 1704 | 345 | 1,072,470 | 3108 |
| June | 459 | 1,173,460 | 2556 | 10 | 18,110 | 1811 | 351 | 1,091,180 | 3108 |
| July | 275 | 680,040 | 2472 | 3 | 5,630 | 1876 | 294 | 1,002,170 | 3409 |
| August | 346 | 829,220 | 2396 | 6 | 10,680 | 1780 | 294 | 1,003,130 | 3412 |
| September | 313 | 839,220 | 2681 | 5 | 7,450 | 1490 | 276 | 959,940 | 3477 |
| October | 336 | 895,290 | 2664 | 7 | 11,290 | 1613 | 288 | 1,112,050 | 3861 |
| November | 226 | 557,450 | 2466 | ..... | ..... | ..... | 291 | 1,142,280 | 3925 |
| December | 142 | 311,660 | 2195 | ..... | ..... | ..... | 135 | 464,260 | 3439 |
| | 3652 | 8,952,330 | 2451 | 368 | 633,540 | 1721 | 2662 | 8,993,150 | 3378 |

## SUMMARY

| | Garbage | Tins | Ashes |
|---|---|---|---|
| **Total Weights Hauled.** | lbs. | lbs. | lbs. |
| Teams | 3,752,150 | 8,952,330 | 98,314,000 |
| Singles | 1,307,585 | 633,540 | ..... |
| Trucks | 37,265,695 | 8,993,150 | 10,659,000 |
| Total | 42,325,430 | 18,579,020 | 108,973,000 |
| **Total Number of Loads Hauled.** | | | |
| Teams | 1,411 | 3,652 | 21,631 |
| Singles | 645 | 368 | ..... |
| Trucks | 11,230 | 2,662 | 1,747 |
| Total | 13,286 | 6,682 | 23,378 |

| | |
|---|---|
| Combined Weights | 169,877,450 lbs. |
| Combined Loads | 43,346 |
| All Over Average Weight to Load | 3,919 lbs. |
| Total Tonnage of Refuse Handled | 84,939 tons |

## MONTHLY COSTS OF GARBAGE, TINS AND ASHES FOR 1927

| 1927 | GARBAGE | | | | | | | | | ASHES | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TEAMS | | | SINGLES | | | TRUCKS | | | HIRED TEAMS | | | TRUCKS | | |
| | Gross Cost | Cost per Load | Cost per Ton | Gross Cost | Cost per Load | Cost per Ton | Gross Cost | Cost per Load | Cost per Ton | Gross Cost | Cost per Load | Cost per C. Yd. | Gross Cost | Cost per Load | Cost per C. Yd. |
| Jan. | $ 518.30 | $6.24 | $5.69 | $ 242.19 | $3.51 | $4.17 | $ 5,668.04 | $6.18 | $4.48 | $ 3,856.25 | $1.97 | $0.394 | $ 904.59 | $4.07 | $0.633 |
| Feb. | 349.13 | 6.12 | 5.37 | 226.40 | 3.43 | 4.11 | 4,963.86 | 5.72 | 4.17 | 4,425.03 | 1.65 | 0.368 | 1,675.62 | 3.68 | 0.592 |
| Mar. | 401.98 | 5.99 | 4.96 | 265.91 | 3.32 | 3.85 | 5,420.75 | 5.63 | 3.71 | 6,959.09 | 1.30 | 0.289 | 2,043.24 | 3.73 | 0.600 |
| April | 838.33 | 6.98 | 5.23 | 242.67 | 3.97 | 4.11 | 5,725.19 | 6.17 | 3.66 | 5,849.76 | 0.914 | 0.203 | 168.86 | 4.11 | 0.657 |
| May | 1,694.82 | 5.76 | 3.58 | 167.30 | 3.56 | 3.89 | 5,232.69 | 6.28 | 3.71 | 2,568.29 | 1.226 | 0.272 | 60.28 | 5.02 | 0.753 |
| June | 951.94 | 6.52 | 5.06 | 263.20 | 3.37 | 3.17 | 5,966.95 | 6.00 | 3.38 | 344.41 | 1.680 | 0.373 | ..... | ..... | ..... |
| July | 929.46 | 7.74 | 6.23 | 289.39 | 4.90 | 3.85 | 5,460.54 | 6.17 | 3.36 | 75.80 | 1.263 | 0.280 | ..... | ..... | ..... |
| Aug. | 880.06 | 6.66 | 5.64 | 282.98 | 4.04 | 3.29 | 5,919.72 | 6.00 | 3.28 | 31.95 | 0.863 | 0.192 | ..... | ..... | ..... |
| Sept. | 753.32 | 7.38 | 4.71 | 299.99 | 3.65 | 3.22 | 5,913.59 | 6.12 | 2.93 | 69.77 | 1.480 | 0.329 | ..... | ..... | ..... |
| Oct. | 691.05 | 6.28 | 4.61 | 115.03 | 3.48 | 3.45 | 5,468.61 | 5.89 | 3.22 | 192.88 | 1.634 | 0.363 | 30.59 | 3.06 | 0.437 |
| Nov. | 596.27 | 6.27 | 5.67 | ..... | ..... | ..... | 5,813.68 | 6.08 | 3.97 | 2,478.16 | 2.884 | 0.641 | 500.35 | 5.88 | 0.856 |
| Dec. | 532.60 | 6.26 | 6.63 | ..... | ..... | ..... | 5,621.57 | 5.56 | 4.08 | 3,988.32 | 2.164 | 0.480 | 1,287.80 | 3.434 | 0.641 |
| | $9,137.26 | $6.47 | $4.87 | $2,395.06 | $3.71 | $3.66 | $67,175.19 | $5.98 | $3.60 | $30,839.71 | $1.425 | $0.314 | $6,671.33 | $3.818 | $0.625 |

## MONTHLY COSTS OF GARBAGE, TINS AND ASHES FOR 1927

| 1927 | TINS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | TEAMS | | | SINGLES | | | TRUCKS | | |
| | Gross Cost | Cost per Load | Cost per Ton | Gross Cost | Cost per Load | Cost per Ton | Gross Cost | Cost per Load | Cost per Ton |
| January | $ 1,099.97 | $5.88 | $5.14 | $ 399.72 | $3.57 | $4.03 | $ 851.37 | $6.54 | $4.52 |
| February | 1,065.93 | 6.12 | 5.35 | 248.83 | 3.55 | 4.29 | ..... | ..... | ..... |
| March | 2,714.71 | 5.94 | 5.51 | 282.00 | 3.61 | 4.20 | ..... | ..... | ..... |
| April | 2,292.02 | 6.06 | 4.92 | 175.31 | 4.17 | 4.87 | 1,391.70 | 5.39 | 3.61 |
| May | 2,123.06 | 5.91 | 4.60 | 128.88 | 3.68 | 4.29 | 1,673.14 | 4.85 | 3.12 |
| June | 2,416.96 | 5.26 | 4.11 | 22.52 | 2.25 | 2.50 | 1,764.45 | 5.02 | 3.23 |
| July | 1,778.22 | 6.46 | 5.23 | 20.85 | 6.95 | 7.40 | 1,772.40 | 6.02 | 3.53 |
| August | 2,061.63 | 5.95 | 4.96 | 28.48 | 4.73 | 5.33 | 1,708.51 | 5.81 | 3.40 |
| September | 1,862.65 | 5.95 | 4.43 | 14.51 | 2.90 | 3.89 | 1,535.29 | 5.56 | 3.19 |
| October | 1,789.43 | 5.32 | 3.99 | 19.29 | 2.75 | 3.41 | 1,494.11 | 5.19 | 2.69 |
| November | 1,451.63 | 6.42 | 5.20 | ..... | ..... | ..... | 1,578.92 | 5.42 | 2.76 |
| December | 899.19 | 6.33 | 5.77 | ..... | ..... | ..... | 667.91 | 4.94 | 2.88 |
| | $21,555.40 | $5.90 | $4.81 | $1,340.39 | $3.64 | $4.22 | $14,437.80 | $5.42 | $3.21 |

### SUMMARIZATION OF COLLECTION COSTS BY THE TON

| | Garbage | Tins | Ashes |
|---|---|---|---|
| Teams | $4.87 | $4.81 | $0.627 |
| Singles | 3.66 | 4.22 | ..... |
| Trucks | 3.60 | 3.21 | 1.251 |